

Transportation Impact Assessment

Proposed Residential Development
1021 & 1025 Massachusetts Avenue
Arlington, Massachusetts

Prepared for:

The Maggiore Companies
Woburn, Massachusetts

June 2022

Prepared by:

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EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate the potential traffic impacts associated with the proposed redevelopment of two existing commercial properties located at 1021 & 1025 Massachusetts Avenue in Arlington, Massachusetts, in order to accommodate a proposed 50-unit residential apartment development that will provide a total of 50 on-site parking spaces. This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project.

As documented in this assessment:

- Project-related traffic increases are expected to amount to 18 new vehicle trips (5 entering and 13 exiting) during the weekday morning peak hour and 27 new vehicle trips (16 entering and 11 exiting) during the weekday evening peak hour;
- No notable safety deficiencies were identified within the study area, with all study area intersections exhibiting motor vehicle crash rates below the MassDOT state average, and available sight lines exceeding the minimum requirements to ensure safe access to and from the Project;
- In comparison to future No-Build traffic volumes, Project-related traffic increases amount to an increase in peak hour traffic volumes of approximately 0.6 to 1.7 percent;
- Project-related traffic conditions are expected to amount to only minor increases to delays as compared to future No-Build conditions.

The following recommendations are provided to ensure safe and efficient access to the Project.

RECOMMENDATIONS

Site Access

Access to the Project site is proposed via new curb cut on the northern side of Massachusetts Avenue, between Menotomy Road and Orchard Place. The proposed driveway will provide a single entering and exiting lane of travel. It is recommended that the proposed driveway be placed under STOP-sign control, with a painted STOP bar at the driveway approach to Massachusetts Avenue. In order to ensure safe and efficient access to the Project and that adequate sightlines are provided in both directions along Massachusetts Avenue, all signs and landscaping should be designed as to not impede lines of sight in both directions.

Transportation Demand Management

In order to minimize the number of single occupancy vehicles (SOVs) arriving and departing the Project, and to take advantage of transit, bicycle and pedestrian facilities that are available to residents of the Project, the proponent is committed to implementing a comprehensive Transportation Demand Management (TDM) Plan. Elements of the plan include the following measures:

- ***Orientation Packets:*** Prior to move in activities, the Proponent will provide orientation packets to new residents and tenants containing information on site access and circulation; and available transportation choices, including transit routes/schedules and nearby vehicle sharing locations and bicycle facilities.
- ***Bicycle Accommodation:*** The Proponent will provide interior and exterior bicycle storage in secure sheltered areas for residents and visitors of the Project.

CONCLUSION

In summary, the addition of Project-related traffic to study area roadways and intersections is not anticipated to significantly impact traffic operations within the study area over No-Build conditions. As documented in this report, Project-related traffic increases do not result in significant impact to area traffic operations, with only minimal increases to motorist delays projected along the Massachusetts Avenue corridor. With implementation of the above recommendations, the proposed Project can be built with minimal traffic impact on the surrounding roadway system.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate the potential traffic impacts associated with the proposed redevelopment of two existing commercial properties located at 1021 & 1025 Massachusetts Avenue in Arlington, Massachusetts, in order to accommodate a proposed 50-unit residential apartment development that will provide a total of 50 on-site parking spaces. This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project.

PROJECT DESCRIPTION

The Project site is situated on an approximate 1.0± acre parcel of land located on the northern side of Massachusetts Avenue in Arlington, Massachusetts. The Project site is generally bounded by private properties to the east, west and north, and by Massachusetts Avenue to the south. The Project site currently houses two buildings, with the 1021 Massachusetts Avenue property utilized as a medical office building, and the 1025 Massachusetts Avenue building utilized as a multi-family residential property. Under existing conditions, access to the Project site is provided via two unsignalized driveways onto the northern side of Massachusetts Avenue.

The Project entails the razing of the existing buildings on site and the construction of a new 50-unit multi-family apartment building providing a total of 50 parking spaces. The Project would also provide approximately 935± square feet (sf) of ground level commercial space. The proposed parking would provide 41 spaces in a ground level garage below the residential building, with an additional 9 surface parking spaces provided in the rear of the building. Access to the Project is proposed via a new driveway at the western side of the project site that would provide access to both the ground level parking garage and surface parking spaces.

The location of the Project site relative to the surrounding roadway network is displayed in Figure 1.



Figure 1

Site Location and
Study Area Map



STUDY METHODOLOGY

This study was prepared in consultation with the Town of Arlington and in accordance with the Massachusetts Department of Transportation (MassDOT) Guidelines for traffic impact assessments and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages. The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian facilities; observations of traffic flow; review of safety characteristics along area roadways and collection of daily and peak period traffic counts. In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for analyses consistent with state guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues. The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in March of 2022. The field investigation consisted of an inventory of existing roadway geometrics, pedestrian facilities, traffic volumes, and operating characteristics; as well as posted speed limits and land use information for the major roadways that provide access to the Project including Massachusetts Avenue and the key intersections which are expected to accommodate the majority of Project-related traffic. The study area for the project is listed below and graphically depicted in Figure 2.

1. Massachusetts Avenue at Brattle Street
2. Massachusetts Avenue at Menotomy Road
3. Massachusetts Avenue at Orchard Place
4. Massachusetts Avenue at Walnut Street
5. Massachusetts Avenue at site driveway (proposed)

The following describes the study area roadways and intersections:

GEOMETRY

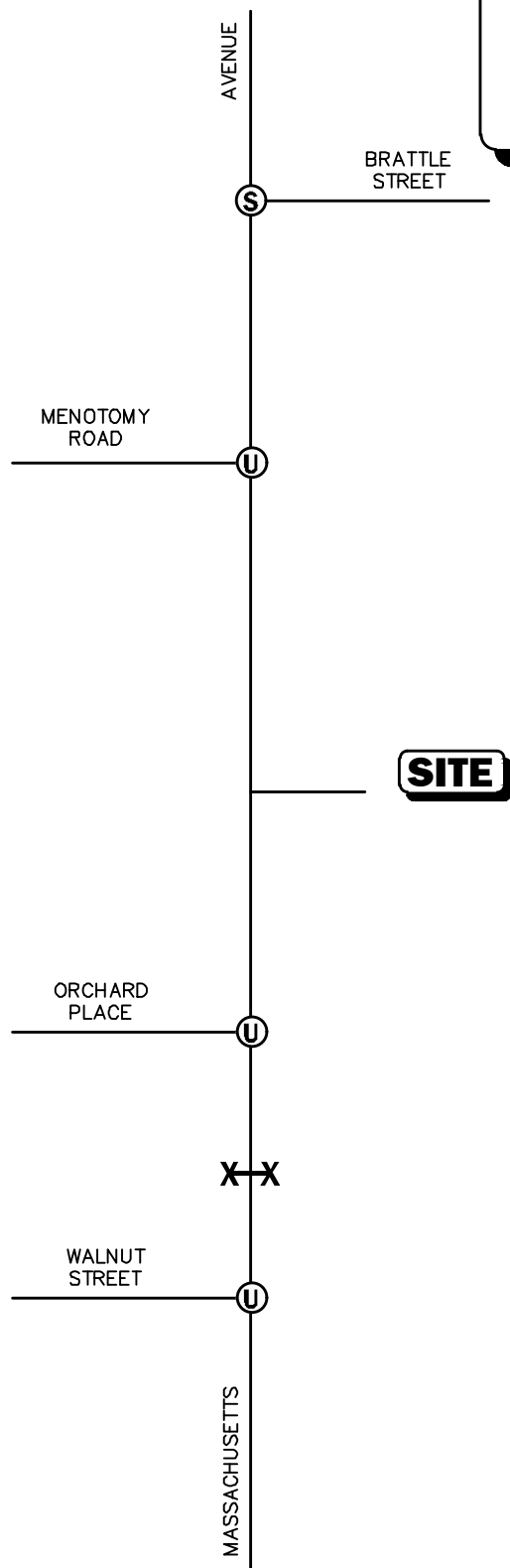
Roadways

Massachusetts Avenue

Massachusetts Avenue is a two-lane principal arterial roadway under Town of Arlington jurisdiction that traverses the study area in a general east west direction, providing connections to the Dorchester neighborhood of Boston to the east and Minuteman Park in Lexington to the west. In the vicinity of the Project site, Massachusetts Avenue provides a single approximately 12-foot lane of travel in each direction, separated by a painted double-yellow center line. An approximate 5-foot wide exclusive bicycle lane is provided in each direction. Sidewalk is provided continuously along both sides of the corridor. Two-hour parking is provided on both sides of the roadway via 8-foot wide parking lanes. There are two Massachusetts Bay Transportation Authority (MBTA) bus stops located immediately west of the Project site, one in each direction, that service the MBTA's Route 77 and Route 79 bus routes.

Legend:

- ⓪ Unsignalized Intersection
- Ⓢ Signalized Intersection
- X-X Automatic Traffic Recorder Count Location



Not To Scale

Figure 2

Traffic Count Locations



Intersections

Massachusetts Avenue at Brattle Street

Brattle Street intersects Massachusetts Avenue from the north to form a three-way intersection that operates under traffic signal control. The Massachusetts Avenue eastbound approach provides an exclusive left-turn lane and a through lane. The Massachusetts Avenue westbound approach and Brattle Street southbound approaches provide a single general purpose travel lane. Bicycle lanes or sharrows are provided in both directions on Massachusetts Avenue. Sidewalk is provided continuously along both sides of Massachusetts Avenue and Brattle Street at this location, with painted crosswalks provided across all three intersection approaches. The traffic signal at this location operates under a three-phase signal plan, with an exclusive pedestrian phase provided via push-button activation. Illumination is provided by way of street lights mounted on utility poles. Land use in the vicinity of this intersection consists primarily of a mix of commercial and residential properties.

Massachusetts Avenue at Menotomy Road

Menotomy Road intersects Massachusetts Avenue from the south to form a three-way intersection that operates under STOP-sign control. The Massachusetts Avenue eastbound and westbound approaches provide a single lane of travel in each direction. The Menotomy Road northbound approach provides a single lane of travel that operates under STOP-sign control. Bicycle lanes or sharrows are provided in both directions on Massachusetts Avenue. Sidewalk is provided continuously along both sides of Massachusetts Avenue and Menotomy Road at this location, with a painted crosswalk provided across the northbound Menotomy Road approach. Illumination is provided by way of street lights mounted on utility poles. Land use in the vicinity of this intersection consists primarily of a mix of commercial and residential properties.

Massachusetts Avenue at Orchard Place

Orchard Place intersects Massachusetts Avenue from the south to form a three-way intersection that operates under STOP-sign control. The Massachusetts Avenue eastbound and westbound approaches provide a single lane of travel in each direction. The Orchard Place northbound approach provides a single lane of travel that operates under STOP-sign control. Bicycle lanes or sharrows are provided in both directions on Massachusetts Avenue. Sidewalk is provided continuously along both sides of Massachusetts Avenue at this location, with a painted crosswalk provided across the northbound Orchard Place approach. Illumination is provided by way of street lights mounted on utility poles. Land use in the vicinity of this intersection consists primarily of a mix of commercial and residential properties.

Massachusetts Avenue at Walnut Street

Walnut Street intersects Massachusetts Avenue from the south to form a three-way intersection that operates under STOP-sign control. The Massachusetts Avenue eastbound and westbound approaches provide a single lane of travel in each direction. The Walnut Street northbound approach provides a single lane of travel that operates under STOP-sign control. Bicycle lanes or sharrows are provided in both directions on Massachusetts Avenue. Sidewalk is provided continuously along both sides of Massachusetts Avenue and Walnut Street at this location, with a painted crosswalk provided across the northbound Walnut Street approach. Illumination is provided by way of street lights mounted on utility poles. Land use in the vicinity of this intersection consists primarily of a mix of commercial and residential properties.

EXISTING TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, traffic counts were conducted along Massachusetts Avenue by way of an automatic traffic recorder (ATR) count in March 2022. Additionally, peak period turning movement counts were conducted at all study area locations between the hours of 7:00 and 9:00 AM, and 4:00 and 6:00 PM. These time periods represent the peak period of roadway and residential traffic. Based on a review of the collected data, the peak hours of roadway traffic occurred between 8:00 and 9:00 AM during the weekday morning and between 4:30 and 5:30 PM during the weekday evening.

Seasonal Variation

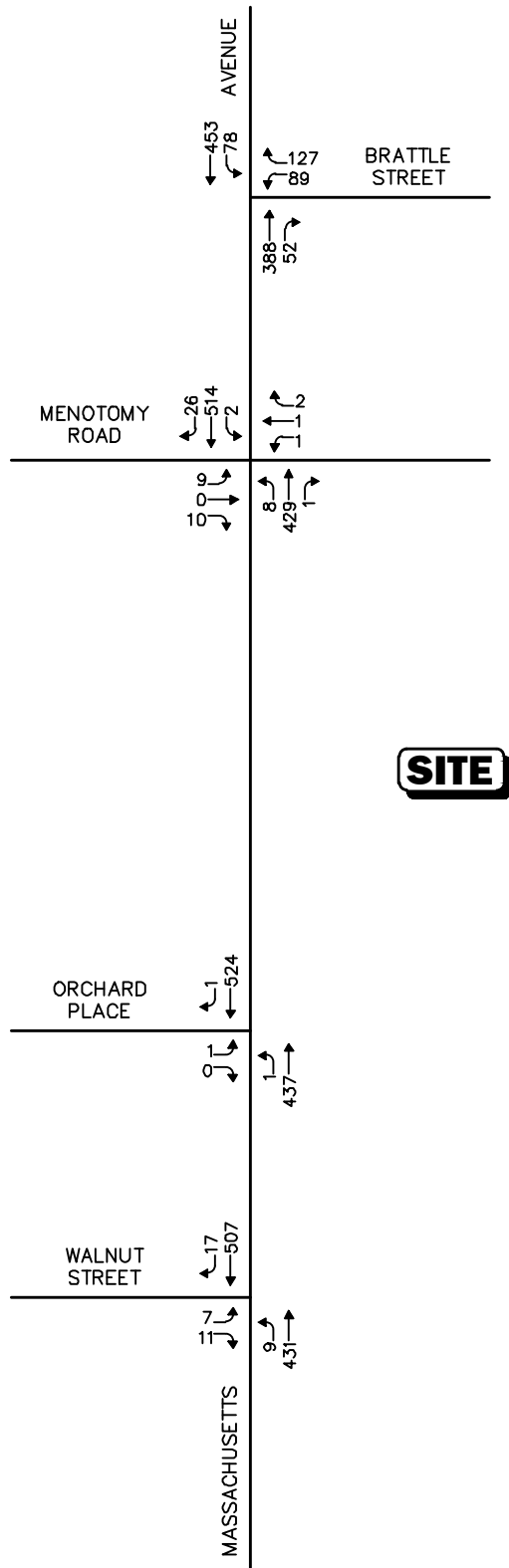
In order to identify whether traffic volumes collected in March are representative of typical traffic conditions, seasonal adjustment data published by MassDOT were reviewed. Massachusetts Avenue falls within Group U3 – “Urban Other Principal Arterial.” Based on a review of this data, March traffic volumes are approximately 3 percent higher than average annual conditions, and therefore the collected data represent a conservative analysis scenario.

Massachusetts Avenue, in the vicinity of the Project, was found to accommodate approximately 11,908 vehicles on an average weekday (24-hour, two-way volume), with approximately 963 vehicles per hour (vph) during the weekday morning peak hour and 968 vph during the weekday evening peak hour.

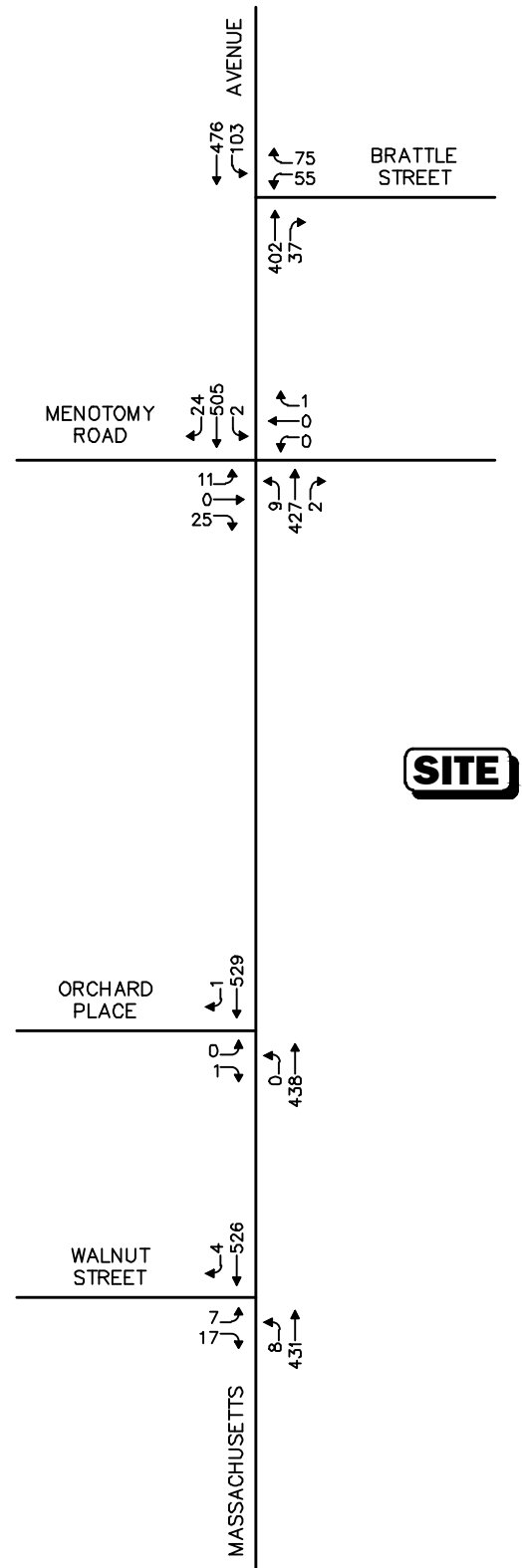
A review of the peak-period traffic counts indicates that the weekday morning peak hour generally occurs between 8:00 and 9:00 AM, with the weekday evening peak hour, generally occurring between 4:30 and 5:30 PM.

The 2022 Existing traffic volumes are summarized in Table 1, with the weekday morning and evening peak-hour traffic volumes graphically depicted on Figures 3.

WEEKDAY MORNING PEAK HOUR



WEEKDAY EVENING PEAK HOUR



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 3

Table 1
EXISTING ROADWAY TRAFFIC-VOLUME SUMMARY

Location	Daily Volume (vpd) ^a	Weekday Morning Peak Hour (8:00 – 9:00 AM)			Weekday Afternoon Peak Hour (4:30 – 5:30 PM)		
		Volume (vph) ^b	Percent of Daily Traffic ^c	Predominant Flow	Volume (vph)	Percent of Daily Traffic	Predominant Flow
Massachusetts Avenue, west of Walnut Street	11,908	963	8.1	55% EB	968	8.1	55% EB

Source: Automatic traffic recorder counts and manual turning movement counts conducted in March 2022.

^aTwo-way daily traffic expressed in vehicles per day.

^b Manual turning movement counts conducted in March 2022.

^cThe percent of daily traffic that occurs during the peak hour.

EB = eastbound, WB = westbound

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in March of 2022. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study area roadways and at the study area intersections. In general, sidewalk is currently provided continuously along Massachusetts Avenue, in the vicinity of the Project, with a signalized pedestrian crossing of Massachusetts Avenue provided at Brattle Street. Painted crosswalks are provided across all minor street unsignalized approaches to Massachusetts Avenue within the study area.

PUBLIC TRANSPORTATION

The study area is served by public transportation services provide by the Massachusetts Bay Transit Authority (MBTA), with bus stops provided on both the eastbound and westbound sides of Massachusetts Avenue, immediately west of the Project site. Specifically, the study area is served by the following bus routes:

MBTA Bus Route 77: Arlington Heights – The MBTA Bus Route 77 provides weekday service between Arlington Heights and the Harvard Red Line T station in Cambridge. Weekday service is provided along this route between 4:48 AM and 1:35 AM, with approximate 10 to 20 minute peak hour headways. Less frequent service is provided along this route on Saturday and Sunday. Service is provided along both the eastbound and westbound sides of Massachusetts Avenue, in close proximity to the Project site.

MBTA Bus Route 67: Turkey Hill/Alewife Station – The MBTA Bus Route 67 provides weekday service between Alewife Station, at the western terminus of the MBTA’s Red Line and Turkey Hill in Arlington. Weekday service is provided along this route between 6:00 AM and 8:32 PM, with approximate 30 minute peak hour headways. Service is provided at the intersection of Massachusetts Avenue with Mill Street, approximately 0.5 miles east of the Project site.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2016 through 2020 inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, and severity, and is presented in Table 2.

As summarized in Table 2, the intersection of Massachusetts Avenue with Brattle Street experienced the highest frequency of accidents over the five-year review period with a total of 10 collisions reported at the intersection, averaging 2.0 crashes per year. The majority of accidents involved property damage only, occurred on dry pavement, and involved angle or rear-end collisions. The motor vehicle crash rate for this location falls below MassDOT's average crash rate for signalized intersections in this MassDOT District.

The intersection of Massachusetts Avenue with Walnut Street experienced a total of 8 motor vehicle collisions over the five-year review period, averaging 1.6 crashes per year. The majority of accidents involved property damage only, occurred on dry pavement, and involved angle type collisions. The motor vehicle crash rate for this location falls below MassDOT's average crash rate for signalized intersections in this MassDOT District.

The remaining study area locations exhibited significantly lower crash frequency, all locations exhibiting crash rates below the District average in which the project is located (District 4). No fatalities were reported at any of the study area intersections over the five-year period reviewed.

The Highway Safety Improvement Program (HSIP) database was reviewed to identify whether any of the study area intersections are listed as HSIP-eligible clusters in the most recent (2017-2019) HSIP cluster listing. Based on this review, no study area intersections are identified as HSIP-eligible cluster locations.

SIGHT DISTANCE ANALYSIS

In order to ensure safe and efficient access will be provided to and from the Project site, a sight distance analysis was conducted for the proposed site driveway with Massachusetts Avenue. Specifically, available sight lines at the proposed driveway location were compared to the sight distance requirements as defined by the American Association of State Highway and Transportation Officials (AASHTO).

As previously noted, the posted speed limit along Massachusetts Avenue is 25 miles per hour. However, based on vehicle speed data collected in conjunction with the automatic traffic recorder counts conducted along the corridor, the 85th percentile speed limit, which is utilized for roadway design and the establishment of required sight distance, was determined to be 33 mph in the eastbound direction and 32 mph in the westbound direction. In order to provide a conservative assessment of sight distance requirements, a higher 35 mph design speed was utilized for both travel directions. Based on this design speed, a total of 250 feet of sight distance is required to and from the proposed driveway locations. Field observations reveal that sight lines exceed 500 feet in both directions, well exceeding the AASHTO requirement.

Table 2
MOTOR VEHICLE CRASH DATA SUMMARY^a

Scenario	Massachusetts Avenue at Brattle Street	Massachusetts Avenue at Walnut Street	Massachusetts Avenue at Orchard Place	Massachusetts Avenue at Menotomy Road
<i>Year:</i>				
2016	2	0	0	0
2017	2	3	2	0
2018	2	2	1	0
2019	4	1	0	0
<u>2020</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>1</u>
Total	10	8	3	1
Average ^b	2.0	1.6	1.0	0.0
Crash Rate ^c	0.37	0.35	0.13	0.00
Significant ^d	No	No	No	No
<i>Type:</i>				
Angle	2	5	0	0
Rear-End	5	0	1	0
Head-On	0	0	0	0
Sideswipe	1	2	1	0
Fixed Object	2	1	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	10	8	3	0
<i>Day:</i>				
Weekday	8	8	3	0
Saturday	1	0	0	0
<u>Sunday</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	8	3	0
<i>Lighting Conditions:</i>				
Daylight	10	6	2	0
Dawn/Dusk	0	1	0	0
Dark (lit)	0	1	1	0
Dark (unlit)	0	0	0	0
<u>Unknown</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	8	3	0
<i>Pavement Conditions</i>				
Dry	9	5	1	0
Wet	1	2	1	0
Snow	0	0	1	0
Ice	0	0	0	0
<u>Unknown(Other)</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	10	8	3	0
<i>Severity:</i>				
Property Only	6	4	2	0
Injury Accident	3	3	0	0
Fatal Accident	0	0	0	0
<u>Unknown/Other</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>
Total	10	8	3	0

^aSource: MassDOT, 2016 through 2020

^bAverage crashes over five-year period.

^cCrash rate per million entering vehicles (mev).

^dUnsignalized intersections are significant if rate >0.57 crashes per million vehicles

^eSignalized intersections are significant if rate >0.73 crashes per million vehicles

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2029, which reflects a seven-year planning horizon consistent with State Traffic Study Guidelines. Independent of the Project, traffic volumes on the roadway network in the year 2029 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon this 2029 No-Build traffic network reflect the 2029 Build conditions with the Project.

FUTURE TRAFFIC GROWTH

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Background Traffic Growth

In order to account for background growth in traffic, independent of any specific area development projects, a one percent annual compounded growth rate was applied to area traffic volumes over the seven year planning horizon. This growth rate is consistent with the background growth rate utilized for other recently conducted area traffic assessments.

Specific Developments by Others

In addition to the aforementioned background growth rate, traffic volumes associated with the following area development projects were identified based on consultation with the Town of Arlington's Planning & Community Development Department, and have been incorporated into the analysis of future traffic conditions.

1165R Massachusetts Avenue - Arlington, Massachusetts – The 1165R Massachusetts Avenue redevelopment project entails the demolition of two existing commercial buildings, the renovation of two existing buildings and the construction of two new buildings in order to accommodate a proposed 130-unit residential apartment development. Additional traffic expected to be generated by this project were obtained from the traffic impact assessment¹ prepared for this development, and have been included in the analysis of future traffic conditions.

No other developments were identified that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

ROADWAY IMPROVEMENT PROJECTS

The Town of Arlington's Planning & Community Development Department was contacted to identify if any roadway or traffic signal improvement projects are proposed within the study area that would affect future traffic operations along the Massachusetts Avenue corridor. Based on these discussions, the Town is currently evaluating potential improvements for the intersection of Massachusetts Avenue with Appleton Street, approximately one half mile west of the Project. No improvement projects were identified within the study area that are expected to influence future traffic conditions.

NO-BUILD TRAFFIC VOLUMES

The 2029 No-Build peak-hour traffic-volume networks were developed by applying the background growth rate to the 2022 Existing traffic volumes, as well as traffic associated with the aforementioned background development project. The resulting 2029 No-Build weekday morning and weekday evening peak-hour traffic volume networks are shown on Figure 4.

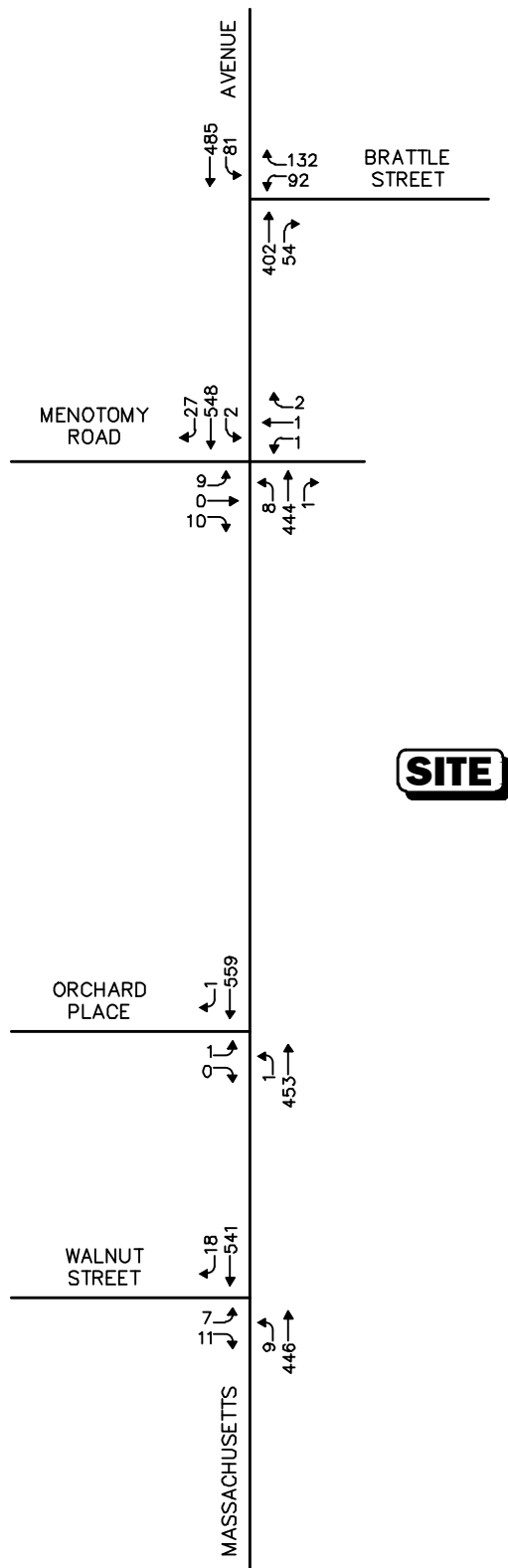
PROJECT-GENERATED TRAFFIC

The proposal entails the development of a multi-unit residential building that will provide a total of 50 apartment units. In order to develop the traffic characteristics of this proposal, trip-generation statistics published by the Institute of Transportation Engineers (ITE)² as part of the *Trip Generation* manual for LUC 220 – *Multifamily Housing (Mid-Rise) Not Close to Rail Transit* were used. This land use code represent the most appropriate category for the proposed redevelopment of the site. Additionally, ITE data for LUC 822 – *Strip Retail Plaza* were utilized to develop the trip generation characteristics of the limited ancillary ground level commercial space. This land use code, which is new to the 11th edition of the manual,

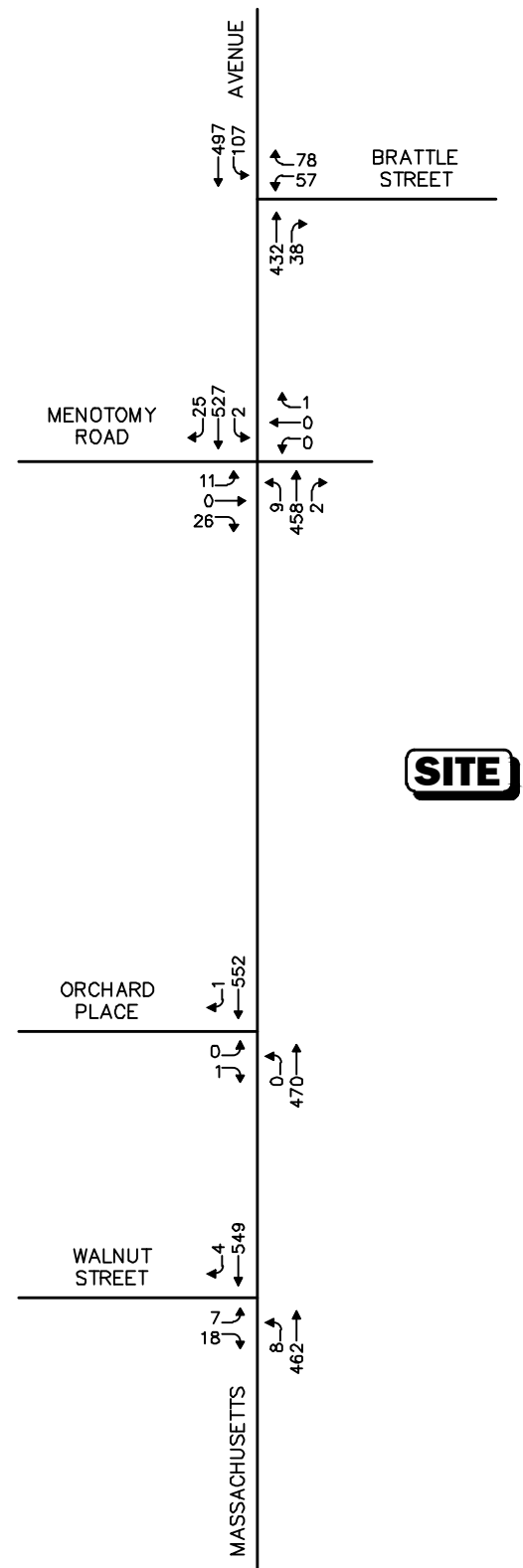
¹ *Traffic Impact Report – 1165R Mass Ave Apartments, 1165R Massachusetts Avenue, Arlington, MA*; Nitsch Engineering, May 12, 2021.

² *Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; September 2021.

WEEKDAY MORNING PEAK HOUR



WEEKDAY EVENING PEAK HOUR



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 4

is intended for small commercial developments, and likely represents a conservative projection of trips associated with the commercial space, which is expected to draw primarily from existing pedestrian flows in the area.

These data were also adjusted to reflect the use of alternative modes of travel by residents of the Project. Specifically, based on a review of U.S. Census data, approximately 26 percent of Arlington residents located in proximity of the Project utilized alternative modes of travel, including transit, bicycle and walking trips. In order to provide a conservative assessment of Project impacts a 20 percent reduction was applied to the residential trip generation only, to reflect the use of alternative modes of transportation by residents of the Project. The trip generation projections are summarized in Table 3.

Table 3
TRIP GENERATION SUMMARY^a

Time Period/ Directional Distribution	Residential Trips	Commercial Trips	Non-Auto Trips	New Trips
Weekday Daily	338	50	-68	320
<i>Weekday Morning Peak Hour:</i>				
Entering	5	1	-1	5
Exiting	<u>15</u>	<u>1</u>	<u>-3</u>	<u>13</u>
Total	20	2	-4	18
<i>Weekday Evening Peak Hour:</i>				
Entering	16	3	-3	16
Exiting	<u>10</u>	<u>3</u>	<u>-2</u>	<u>11</u>
Total	26	6	-5	27

^aBased on ITE LUC 221 – Multifamily Housing (Mid-Rise) Not Close to Rail Transit, 50 units.

^bBased on ITE LUC 822 – Strip Retail Plaza, 935 sf.

^bNon-auto trip reduction of 20% applied to residential trips.

As summarized in Table 3, the Project is expected to generate approximately 320 vehicle trips on a typical weekday (160 entering and 160 exiting), including 18 vehicle trips (5 entering and 13 exiting) during the weekday morning peak hour and 27 vehicle trips (16 entering and 11 exiting) during the weekday evening peak hour. It is noted that these projections do not reflect the elimination of existing traffic activity arriving and departing the Project site under current conditions, and therefore represent a conservative analysis scenario.

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of the site-generated trips to and from the proposed development was determined based on a review of existing traffic patterns along the Massachusetts Avenue corridor and the anticipated arrival and distribution patterns for commuter traffic. In general, it is expected that 60 percent

of Project-related traffic will be oriented to and from Massachusetts Avenue, east of the site, with the remaining 40 percent oriented to and from Massachusetts Avenue, west of the site.

The general trip distribution for the project is summarized in Table 5. The weekday morning and weekday evening peak-hour traffic volumes expected to be generated by the Project were assigned on the study area roadway network based on these patterns, as shown on Figure 5.

Table 5
TRIP-DISTRIBUTION SUMMARY

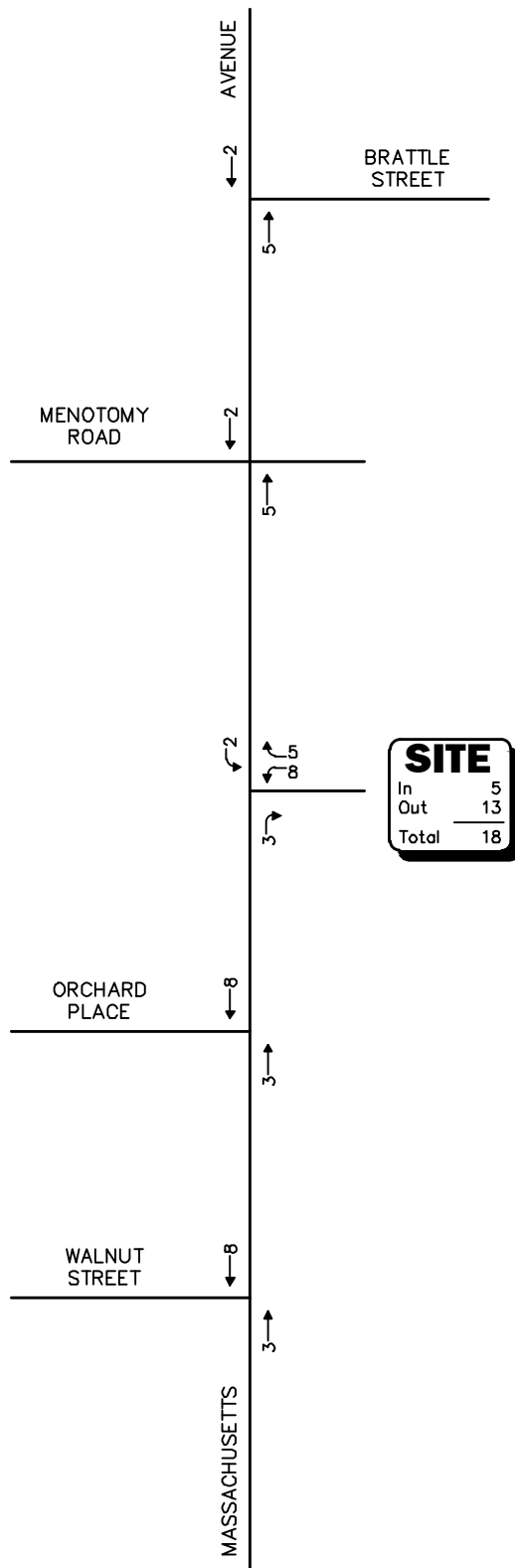
Roadway	Direction (To/From)	Percentage (%)
Massachusetts Avenue	East	40%
Massachusetts Avenue	West	<u>10%</u>
TOTAL		100%

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

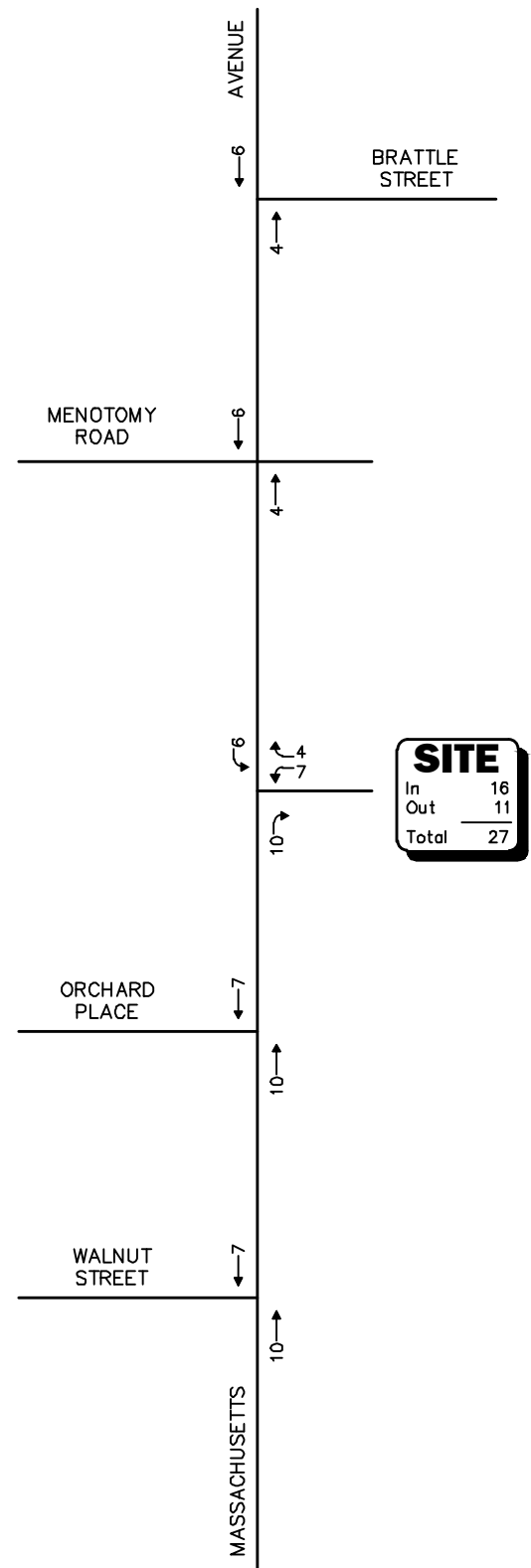
The 2029 Build condition networks consist of the 2029 No-Build traffic volumes with the anticipated Project-generated traffic added to them. The 2029 Build weekday morning and weekday evening peak-hour traffic volume networks are graphically depicted on Figure 6.

A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 6. These volumes are based on the expected increases from the Project.

WEEKDAY MORNING PEAK HOUR



WEEKDAY EVENING PEAK HOUR



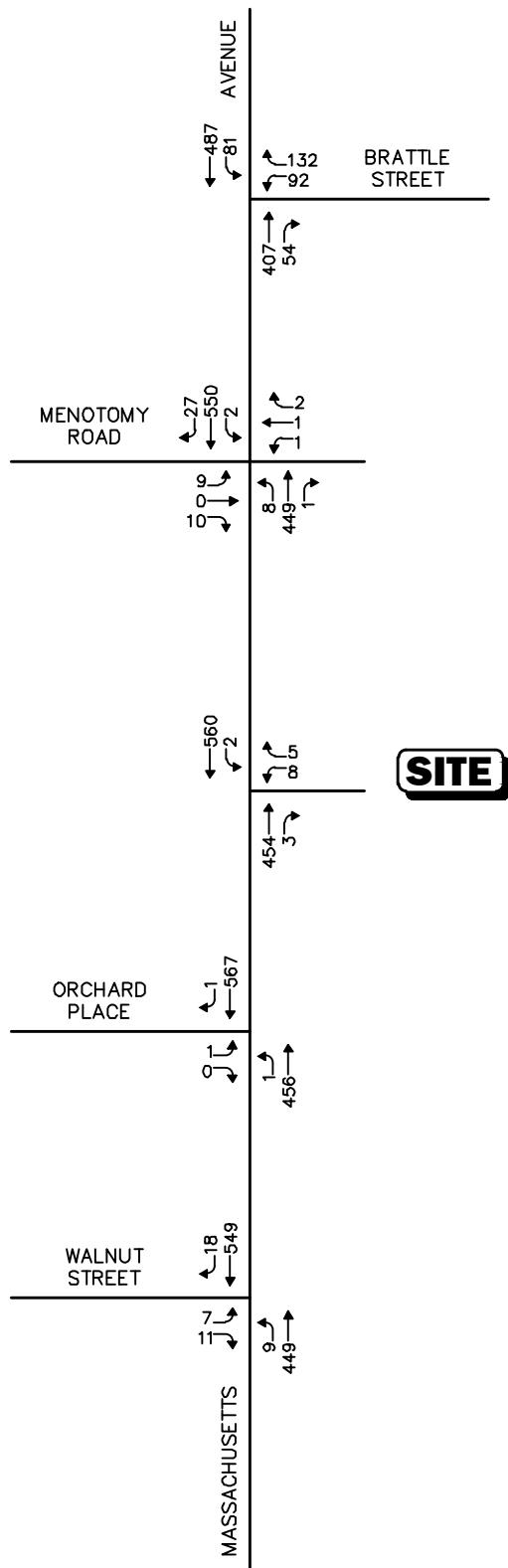
Not To Scale



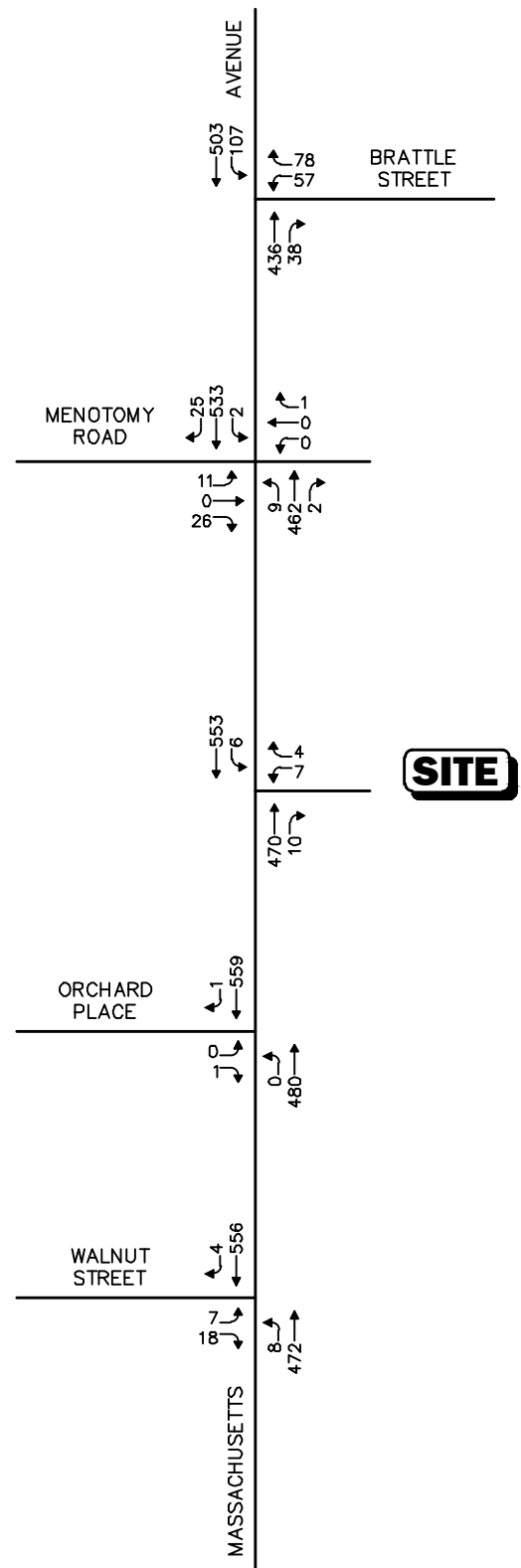
Figure 5

Project-Generated
Peak-Hour Traffic Volumes

WEEKDAY MORNING PEAK HOUR



WEEKDAY EVENING PEAK HOUR



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 6



2029 Build
Peak-Hour Traffic Volumes

Table 6
PEAK HOUR TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2029 No-Build	2029 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Massachusetts Avenue at Brattle Street:</i>				
Weekday Morning	1,246	1,253	7	0.6
Weekday Evening	1,209	1,219	10	0.8
<i>Massachusetts Avenue at Menotomy Road:</i>				
Weekday Morning	1,053	1,060	7	0.7
Weekday Evening	1,061	1,071	10	0.9
<i>Massachusetts Avenue at Orchard Place:</i>				
Weekday Morning	1,015	1,026	11	1.1
Weekday Evening	1,024	1,041	17	1.7
<i>Massachusetts Avenue at Walnut Street:</i>				
Weekday Morning	1,032	1,043	11	1.1
Weekday Evening	1,048	1,065	17	1.6

As summarized in Table 6, in comparison to future 2029 No-Build conditions, overall traffic volumes are expected to increase by approximately 0.6 to 1.6 percent at all off-site locations evaluated as part of this assessment, with overall volumes expected to increase by approximately 7 to 17 vehicles per hour, or approximately one new vehicle trip every 3 to 9 minutes.

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build and Build traffic volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.³ The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing congested or constrained operating conditions.

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.

³The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than *LOS A*.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections were calculated using the Percentile Delay Method implemented as a part of the Synchro™ 8 software as suggested by MassDOT in order to compensate for errors found when employing the 2010 *Highway Capacity Manual* methodology as a part of the software. The Percentile Delay Method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on “percentile” delay. Level-of-service designations are based on the criterion of percentile delay per vehicle and is a measure of: i) driver discomfort; ii) motorist frustration; and iii) fuel consumption; and includes a uniform delay based on percentile volumes using a Poisson arrival pattern, an initial queue move-up time, and a queue interaction delay that accounts for delays resulting from queues extending from adjacent intersections. Table 7 summarizes the relationship between level-of-service and percentile delay, and uses the same numerical delay thresholds as the HCM method. The tabulated percentile delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

Table 7
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS^a

Level of Service	Percentile Delay Per Vehicle (Seconds)
A	≤10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	>80.0

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.

- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the 2010 *Highway Capacity Manual*.⁴ Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the 2010 *Highway Capacity Manual*. Table 8 summarizes the relationship between level of service and average control delay for two way stop controlled and all-way stop controlled intersections.

Table 8
LEVEL-OF-SERVICE CRITERIA FOR
UNSIGNALIZED INTERSECTIONS^a

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
v/c ≤ 1.0	v/c > 1.0	
A	F	≤10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	>50.0

^aSource: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010; page 19-2.

ANALYSIS RESULTS

Level-of-service analyses were conducted for 2022 Existing, 2029 No-Build and 2029 Build conditions for the intersections within the study area. The results of the intersection capacity analyses for signalized and unsignalized intersections are summarized in Table 9 through Table 10, with detailed analysis results provided in the Appendix. The following is a summary of the level-of-service and delay analyses for the intersections within the study area:

⁴*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

Table 9
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Location/Time Period/Movement	2022 Existing			2029 No-Build			2029 Build		
	V/C ^a	Delay ^b	LOS ^c	V/C	Delay	LOS	V/C	Delay	LOS
Massachusetts Avenue at Brattle Street									
<i>Weekday Morning:</i>									
Massachusetts Avenue EB	0.67	23	C	0.72	25	C	0.72	25	C
Massachusetts Avenue WB	0.63	22	C	0.65	22	C	0.66	22	C
Brattle Street SB	0.69	32	C	0.71	33	C	0.71	33	C
Overall	--	24	C	--	25	C	--	26	C
<i>Weekday Evening:</i>									
Massachusetts Avenue EB	0.59	21	C	0.62	22	C	0.63	22	C
Massachusetts Avenue WB	0.56	20	B	0.60	21	B	0.60	21	B
Brattle Street SB	0.35	18	B	0.36	18	B	0.36	18	B
Overall	--	20	B	--	21	B	--	21	B

^aVolume to capacity ratio.

^bDelay in seconds per vehicle.

^cLevel of service.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound

Signalized Intersection Capacity Analysis Results

Massachusetts Avenue at Brattle Street

Under 2022 Existing conditions the intersection of Massachusetts Avenue with Brattle Street currently operates at an overall LOS C or better during the weekday morning and weekday evening peak hours. Under future 2029 No-Build conditions, this intersection is projected to continue to operate at LOS C or better during the weekday morning peak and weekday evening peak hours. Under future Build conditions this location is projected to continue to operate at LOS C or better during the weekday morning and weekday evening peak hours, with Project-related traffic increases resulting in increases to overall delays of approximately 1 or less seconds per vehicle, as compared to No-Build conditions.

Table 10
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Location/Time Period/Movement	2022 Existing			2029 No-Build			2029 Build		
	V/C ^a	Delay ^b	LOS ^c	V/C	Delay	LOS	V/C	Delay	LOS
Massachusetts Avenue at Menotomy Road									
<i>Weekday Morning Peak Hour</i>									
Massachusetts Avenue WB	0.01	<5	A	0.01	<5	A	0.01	<5	A
Menotomy Road NB	0.09	22	C	0.09	24	C	0.10	24	C
<i>Weekday Evening Peak Hour</i>									
Massachusetts Avenue WB	0.01	<5	A	0.01	<5	A	0.01	<5	A
Menotomy Road NB	0.15	18	C	0.17	19	C	0.17	19	C
Massachusetts Avenue at Orchard Place									
<i>Weekday Morning Peak Hour</i>									
Massachusetts Avenue WB	0.00	<5	A	0.00	<5	A	0.00	<5	A
Orchard Place NB	0.02	23	C	0.02	24	C	0.02	25	D
<i>Weekday Evening Peak Hour</i>									
Massachusetts Avenue WB	0.00	<5	A	0.00	<5	A	0.00	<5	A
Orchard Place NB	0.01	12	B	0.01	12	B	0.01	13	B
Massachusetts Avenue at Walnut Street									
<i>Weekday Morning Peak Hour</i>									
Massachusetts Avenue WB	0.01	<5	A	0.01	<5	A	0.01	<5	A
Walnut Street NB	0.10	17	C	0.11	18	C	0.11	19	C
<i>Weekday Evening Peak Hour</i>									
Massachusetts Avenue WB	0.01	<5	A	0.01	<5	A	0.01	<5	A
Walnut Street NB	0.09	15	C	0.10	16	C	0.10	16	C
Massachusetts Avenue at Site Driveway									
<i>Weekday Morning Peak Hour</i>									
Massachusetts Avenue EB	--	--	--	--	--	--	0.00	<5	A
Site Driveway SB	--	--	--	--	--	--	0.04	18	C
<i>Weekday Evening Peak Hour</i>									
Massachusetts Avenue EB	--	--	--	--	--	--	0.01	<5	A
Site Driveway SB	--	--	--	--	--	--	0.04	18	C

^aVolume to capacity ratio.

^bDelay in seconds per vehicle.

^cLevel of service.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound

Unsignalized Capacity Analysis Results

Massachusetts Avenue at Menotomy Road

Under 2022 Existing conditions, mainline traffic volumes along Massachusetts Avenue, at its intersection with Menotomy Road currently operate at LOS A conditions during both the weekday morning and weekday evening peak hours, with all movements from Menotomy Road operating at LOS C or better during both peak periods. Under future 2029 No-Build conditions, mainline traffic volumes on Massachusetts Avenue are projected to continue to operate at LOS A, with Menotomy Road continuing to operate at LOS C or better during the weekday morning and weekday evening peak hours. Under future 2029 Build conditions, mainline traffic volumes on Massachusetts Avenue are projected to continue to operate at LOS A, with Menotomy Road continuing to operate at LOS C or better during both the weekday morning and weekday evening peak hours.

Massachusetts Avenue at Orchard Place

Under 2022 Existing conditions, mainline traffic volumes along Massachusetts Avenue, at its intersection with Orchard Place currently operate at LOS A conditions during both the weekday morning and weekday evening peak hours, with all movements from Orchard Place operating at LOS C or better during both peak periods. Under future 2029 No-Build conditions, mainline traffic volumes on Massachusetts Avenue are projected to continue to operate at LOS A, with Orchard Place continuing to operate at LOS C or better during the weekday morning and weekday evening peak hours. Under future 2029 Build conditions, mainline traffic volumes on Massachusetts Avenue are projected to continue to operate at LOS A, with Orchard Place operating at LOS D or better during both the weekday morning and weekday evening peak hours. Project-related traffic increases result in increases to side street delays of approximately 1 second per vehicle or less as compared to future No-Build conditions.

Massachusetts Avenue at Walnut Street

Under 2022 Existing conditions, mainline traffic volumes along Massachusetts Avenue, at its intersection with Walnut Street currently operate at LOS A conditions during both the weekday morning and weekday evening peak hours, with all movements from Walnut Street operating at LOS C or better during both peak periods. Under future 2029 No-Build conditions, mainline traffic volumes on Massachusetts Avenue are projected to continue to operate at LOS A, with Walnut Street continuing to operate at LOS C or better during the weekday morning and weekday evening peak hours. Under future 2029 Build conditions, mainline traffic volumes on Massachusetts Avenue are projected to continue to operate at LOS A, with Walnut Street continuing to operate at LOS C or better during both the weekday morning and weekday evening peak hours.

Massachusetts Avenue at Site Driveway

Under future 2029 Build conditions, mainline traffic volumes along Massachusetts Avenue, at its intersection with the proposed site driveway are projected to operate at LOS A during both the weekday morning and weekday evening peak hours, with the site driveway southbound approach operating at LOS C during both peak periods.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

As documented in this assessment:

- Project-related traffic increases are expected to amount to 18 new vehicle trips (5 entering and 13 exiting) during the weekday morning peak hour and 27 new vehicle trips (16 entering and 11 exiting) during the weekday evening peak hour;
- No notable safety deficiencies were identified within the study area, with all study area intersections exhibiting motor vehicle crash rates below the MassDOT state average, and available sight lines exceeding the minimum requirements to ensure safe access to and from the Project;
- In comparison to future No-Build traffic volumes, Project-related traffic increases amount to an increase in peak hour traffic volumes of approximately 0.6 to 1.7 percent;
- Project-related traffic conditions are expected to amount to only minor increases to delays as compared to future No-Build conditions.

The following recommendations are provided to ensure safe and efficient access to the Project.

RECOMMENDATIONS

Site Access

Access to the Project site is proposed via new curb cut on the northern side of Massachusetts Avenue, between Menotomy Road and Orchard Place. The proposed driveway will provide a single entering and exiting lane of travel. It is recommended that the proposed driveway be placed under STOP-sign control, with a painted STOP bar at the driveway approach to Massachusetts Avenue. In order to ensure safe and efficient access to the Project and that adequate sightlines are provided in both directions along Massachusetts Avenue, all signs and landscaping should be designed as to not impede lines of sight in both directions.

Transportation Demand Management

In order to minimize the number of single occupancy vehicles (SOVs) arriving and departing the Project, and to take advantage of transit, bicycle and pedestrian facilities that are available to residents of the Project, the proponent is committed to implementing a comprehensive Transportation Demand Management (TDM) Plan. Elements of the plan include the following measures:

- ***Orientation Packets:*** Prior to move in activities, the Proponent will provide orientation packets to new residents and tenants containing information on site access and circulation; and available transportation choices, including transit routes/schedules and nearby vehicle sharing locations and bicycle facilities.
- ***Bicycle Accommodation:*** The Proponent will provide interior and exterior bicycle storage in secure sheltered areas for residents and visitors of the Project.

CONCLUSION

In summary, the addition of Project-related traffic to study area roadways and intersections is not anticipated to significantly impact traffic operations within the study area over No-Build conditions. As documented in this report, Project-related traffic increases do not result in significant impact to area traffic operations, with only minimal increases to motorist delays projected along the Massachusetts Avenue corridor. With implementation of the above recommendations, the proposed Project can be built with minimal traffic impact on the surrounding roadway system.

APPENDIX

TRAFFIC COUNT DATA
MOTOR VEHICLE CRASH DATA
TRIP GENERATION DATA
CAPACITY ANALYSIS WORKSHEETS



TRAFFIC COUNT DATA



Massachusetts Avenue
between Orchard Pl & Walnut St
City, State: Arlington, MA
Client: VAI/S. Kelly
Site Code: 915



Count Date: Wednesday, March 16, 2022
Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	6	1	0	7
12:15 AM	6	1	0	7
12:30 AM	2	1	0	3
12:45 AM	3	2	0	5
1:00 AM	2	1	0	3
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	1	0	0	1
2:00 AM	0	0	0	0
2:15 AM	1	0	0	1
2:30 AM	0	0	0	0
2:45 AM	1	1	1	3
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	1	0	0	1
3:45 AM	1	1	1	3
4:00 AM	0	0	0	0
4:15 AM	4	0	0	4
4:30 AM	6	0	0	6
4:45 AM	4	2	0	6
5:00 AM	6	1	1	8
5:15 AM	5	0	1	6
5:30 AM	8	1	0	9
5:45 AM	17	3	0	20
6:00 AM	20	2	0	22
6:15 AM	31	2	0	33
6:30 AM	44	4	0	48
6:45 AM	38	1	1	40
7:00 AM	64	5	0	69
7:15 AM	98	9	1	108
7:30 AM	95	6	0	101
7:45 AM	98	5	2	105
8:00 AM	133	4	2	139
8:15 AM	167	3	0	170
8:30 AM	99	4	0	103
8:45 AM	106	2	0	108
9:00 AM	82	5	1	88
9:15 AM	87	5	1	93
9:30 AM	88	3	0	91
9:45 AM	91	6	1	98
10:00 AM	98	7	0	105
10:15 AM	73	3	2	78
10:30 AM	77	6	0	83
10:45 AM	65	6	1	72
11:00 AM	92	5	0	97
11:15 AM	84	4	1	89
11:30 AM	97	9	0	106
11:45 AM	109	4	0	113

AM Total	2110	125	17	2252
Percentage	93.69%	5.55%	0.75%	
AM Peak	8:00 AM	7:00 AM	7:15 AM	8:00 AM
Volume	505	25	5	520

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	106	2	0	108
12:15 PM	129	3	0	132
12:30 PM	108	6	0	114
12:45 PM	121	6	0	127
1:00 PM	130	3	0	133
1:15 PM	113	2	0	115
1:30 PM	101	4	0	105
1:45 PM	112	2	0	114
2:00 PM	129	5	0	134
2:15 PM	102	2	0	104
2:30 PM	95	6	1	102
2:45 PM	97	1	0	98
3:00 PM	116	4	0	120
3:15 PM	118	5	0	123
3:30 PM	98	3	0	101
3:45 PM	107	1	0	108
4:00 PM	109	4	0	113
4:15 PM	96	4	0	100
4:30 PM	123	0	1	124
4:45 PM	120	4	0	124
5:00 PM	149	2	0	151
5:15 PM	129	3	0	132
5:30 PM	131	2	0	133
5:45 PM	138	2	0	140
6:00 PM	124	1	0	125
6:15 PM	119	3	0	122
6:30 PM	100	3	0	103
6:45 PM	100	1	0	101
7:00 PM	96	2	0	98
7:15 PM	88	1	0	89
7:30 PM	92	4	0	96
7:45 PM	65	1	1	67
8:00 PM	66	0	0	66
8:15 PM	49	1	0	50
8:30 PM	50	1	0	51
8:45 PM	38	1	0	39
9:00 PM	29	2	0	31
9:15 PM	41	2	0	43
9:30 PM	28	1	0	29
9:45 PM	27	2	0	29
10:00 PM	22	1	0	23
10:15 PM	18	2	0	20
10:30 PM	15	1	0	16
10:45 PM	12	1	0	13
11:00 PM	14	1	0	15
11:15 PM	11	0	1	12
11:30 PM	4	1	0	5
11:45 PM	5	1	0	6

PM Total	3990	110	4	4104
Percentage	97.22%	2.68%	0.10%	
PM Peak	5:00 PM	12:15 PM	1:45 PM	5:00 PM
Volume	547	18	1	556

Day Total	6100	235	21	6356
Percentage	95.97%	3.70%	0.33%	

Massachusetts Avenue
between Orchard Pl & Walnut St
City, State: Arlington, MA
Client: VAI/S. Kelly
Site Code: 915



Count Date: Wednesday, March 16, 2022
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	5	1	0	6
12:15 AM	5	1	0	6
12:30 AM	0	1	0	1
12:45 AM	2	1	0	3
1:00 AM	4	1	0	5
1:15 AM	0	1	0	1
1:30 AM	2	0	0	2
1:45 AM	1	1	0	2
2:00 AM	0	0	1	1
2:15 AM	2	0	0	2
2:30 AM	0	0	0	0
2:45 AM	1	0	0	1
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	1	0	0	1
3:45 AM	4	0	0	4
4:00 AM	2	0	0	2
4:15 AM	1	1	1	3
4:30 AM	3	2	0	5
4:45 AM	3	0	0	3
5:00 AM	6	1	0	7
5:15 AM	7	1	0	8
5:30 AM	9	3	0	12
5:45 AM	20	2	0	22
6:00 AM	14	2	0	16
6:15 AM	18	2	2	22
6:30 AM	23	5	1	29
6:45 AM	32	5	0	37
7:00 AM	44	4	0	48
7:15 AM	55	2	0	57
7:30 AM	70	3	0	73
7:45 AM	81	7	0	88
8:00 AM	103	4	0	107
8:15 AM	119	5	1	125
8:30 AM	99	3	0	102
8:45 AM	91	6	0	97
9:00 AM	82	5	0	87
9:15 AM	60	5	0	65
9:30 AM	65	2	1	68
9:45 AM	86	5	1	92
10:00 AM	68	5	0	73
10:15 AM	54	5	0	59
10:30 AM	66	3	0	69
10:45 AM	75	2	2	79
11:00 AM	77	4	1	82
11:15 AM	64	5	1	70
11:30 AM	81	3	1	85
11:45 AM	95	10	0	105

AM Total	1700	119	13	1832
Percentage	92.79%	6.50%	0.71%	
AM Peak	8:00 AM	11:00 AM	10:45 AM	8:00 AM
Volume	412	22	5	431

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	115	4	0	119
12:15 PM	110	4	0	114
12:30 PM	106	5	0	111
12:45 PM	101	4	1	106
1:00 PM	121	4	0	125
1:15 PM	99	5	0	104
1:30 PM	115	5	0	120
1:45 PM	94	4	0	98
2:00 PM	104	4	0	108
2:15 PM	120	4	0	124
2:30 PM	85	5	0	90
2:45 PM	106	5	0	111
3:00 PM	107	6	0	113
3:15 PM	101	3	0	104
3:30 PM	94	5	0	99
3:45 PM	100	2	0	102
4:00 PM	103	1	0	104
4:15 PM	112	2	0	114
4:30 PM	113	2	0	115
4:45 PM	106	4	0	110
5:00 PM	111	3	0	114
5:15 PM	95	2	0	97
5:30 PM	97	1	0	98
5:45 PM	98	1	0	99
6:00 PM	109	4	0	113
6:15 PM	103	2	0	105
6:30 PM	85	1	0	86
6:45 PM	68	1	0	69
7:00 PM	89	2	0	91
7:15 PM	72	2	0	74
7:30 PM	70	1	0	71
7:45 PM	67	0	0	67
8:00 PM	58	1	0	59
8:15 PM	57	1	0	58
8:30 PM	47	2	0	49
8:45 PM	38	1	0	39
9:00 PM	34	2	0	36
9:15 PM	31	1	0	32
9:30 PM	40	0	0	40
9:45 PM	18	2	0	20
10:00 PM	28	2	0	30
10:15 PM	18	2	0	20
10:30 PM	17	1	0	18
10:45 PM	15	1	0	16
11:00 PM	8	1	0	9
11:15 PM	5	0	0	5
11:30 PM	8	1	0	9
11:45 PM	4	1	0	5

PM Total	3602	117	1	3720
Percentage	96.83%	3.15%	0.03%	
PM Peak	4:15 PM	2:15 PM	12:00 PM	12:15 PM
Volume	442	20	1	456

Day Total	5302	236	14	5552
Percentage	95.50%	4.25%	0.25%	

Massachusetts Avenue
between Orchard Place and Walnut Street
City, State: Arlington, MA
Client: VAI/S. Kelly
Site Code: 915



PDI File #: 228473 ATR A Speed

Count Date
Wednesday, March 16, 2022

Speed (60-minute)

WB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	3	8	4	0	0	0	0	0	0	0	17	35.6	31.2
1:00 AM	0	0	0	2	7	1	0	0	0	0	0	0	0	10	33.3	30.8
2:00 AM	0	1	1	1	1	1	0	0	0	0	0	0	0	5	33.8	27.2
3:00 AM	0	0	0	1	0	4	0	0	0	0	0	0	0	5	38.0	35.0
4:00 AM	1	0	1	3	4	3	1	0	0	0	0	0	0	13	36.2	30.3
5:00 AM	1	0	5	14	17	10	4	0	0	0	0	0	0	51	37.0	31.3
6:00 AM	2	2	2	49	34	11	2	0	0	0	0	0	0	102	34.0	29.7
7:00 AM	1	8	29	109	85	14	3	0	0	0	0	0	0	249	32.0	28.6
8:00 AM	5	15	111	156	86	14	1	0	0	0	0	0	0	388	31.0	26.5
9:00 AM	2	1	31	135	109	28	0	0	0	0	0	0	0	306	33.0	29.1
10:00 AM	2	8	21	107	106	20	0	0	1	0	0	0	0	265	32.4	28.9
11:00 AM	0	3	44	137	96	18	2	2	0	0	0	0	0	302	32.0	28.6
12:00 PM	2	15	59	219	112	16	2	0	0	0	0	0	0	425	31.0	27.6
1:00 PM	3	10	66	217	109	15	1	0	0	0	0	0	0	421	31.0	27.3
2:00 PM	1	13	50	207	111	17	0	0	0	0	0	0	0	399	32.0	27.7
3:00 PM	1	5	55	200	116	15	3	0	0	0	0	0	0	395	32.0	28.0
4:00 PM	1	4	56	228	110	13	1	0	0	0	0	0	0	413	31.0	27.8
5:00 PM	2	18	45	163	133	25	0	0	0	0	0	0	0	386	32.0	28.1
6:00 PM	0	6	27	202	113	17	2	0	0	0	0	0	0	367	32.0	28.5
7:00 PM	1	8	35	136	93	10	0	0	0	0	0	0	0	283	32.0	28.0
8:00 PM	0	1	21	93	68	20	1	1	0	0	0	0	0	205	33.0	29.2
9:00 PM	0	0	13	57	39	12	2	0	0	0	0	0	0	123	33.0	29.4
10:00 PM	1	1	8	25	31	12	3	0	0	0	0	0	0	81	35.0	30.1
11:00 PM	0	0	0	12	10	6	0	0	0	0	0	0	0	28	35.0	31.0
Total	26	119	682	2476	1598	306	28	3	1	0	0	0	0	5239	32.0	28.2
Percent	0.50%	2.27%	13.02%	47.26%	30.50%	5.84%	0.53%	0.06%	0.02%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	9:00 AM	9:00 AM	5:00 AM	11:00 AM	10:00 AM					8:00 AM
Volume	5	15	111	156	109	28	4	2	1	0	0	0	0	388

PM Peak	1:00 PM	5:00 PM	1:00 PM	4:00 PM	5:00 PM	5:00 PM	3:00 PM	8:00 PM						12:00 PM
Volume	3	18	66	228	133	25	3	1	0	0	0	0	0	425

15th Percentile:	24.0 MPH	Average Speed:	28.2 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 25 MPH:	4042
85th Percentile:	32.0 MPH	Number in Pace:	4193	Percent of Vehicles > 25 MPH:	77.2%
95th Percentile:	35.0 MPH	Percent in Pace:	80.0%		

Massachusetts Avenue
between Orchard Place and Walnut Street
City, State: Arlington, MA
Client: VAI/S. Kelly
Site Code: 915



PDI File #: 228473 ATR A Speed

Count Date
Wednesday, March 16, 2022

Speed (60-minute)

EB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	4	12	2	1	0	0	0	0	0	0	20	34.3	32.2
1:00 AM	0	0	1	5	2	0	0	1	0	0	0	0	0	9	32.4	30.3
2:00 AM	0	0	1	2	3	0	1	0	0	0	0	0	0	7	33.0	30.9
3:00 AM	0	0	0	0	3	2	0	0	0	0	0	0	0	5	38.0	33.8
4:00 AM	0	0	4	3	10	1	2	0	0	0	0	0	0	20	34.2	30.5
5:00 AM	0	1	4	14	29	17	4	0	0	0	0	0	0	69	37.0	32.0
6:00 AM	1	3	9	61	62	17	2	0	0	0	0	0	0	155	34.0	29.8
7:00 AM	1	11	39	173	130	19	5	2	2	0	0	0	0	382	33.0	28.9
8:00 AM	21	27	88	174	92	36	2	1	1	0	0	0	0	442	32.0	26.8
9:00 AM	1	3	35	150	137	28	10	1	0	0	0	0	0	365	34.0	29.6
10:00 AM	0	3	26	141	122	27	6	1	2	0	0	0	0	328	33.0	29.7
11:00 AM	1	1	36	202	125	26	9	2	2	0	0	0	0	404	33.0	29.2
12:00 PM	1	15	58	200	114	36	3	1	0	0	0	0	0	428	33.0	28.4
1:00 PM	3	8	78	212	100	22	8	3	1	0	0	0	0	435	32.0	27.9
2:00 PM	4	13	70	186	98	37	4	0	1	0	0	0	0	413	33.0	28.0
3:00 PM	4	6	42	188	148	29	7	3	0	0	0	0	0	427	33.0	29.1
4:00 PM	6	7	68	190	129	36	6	2	0	0	0	0	0	444	33.0	28.5
5:00 PM	2	12	69	243	147	56	11	1	0	0	0	0	0	541	33.0	28.8
6:00 PM	0	6	46	179	147	46	15	0	0	0	0	0	0	439	34.0	29.5
7:00 PM	2	10	56	155	101	27	9	1	0	0	0	0	0	361	33.0	28.6
8:00 PM	2	2	9	88	90	24	10	1	0	0	0	0	0	226	35.0	30.4
9:00 PM	0	5	7	53	55	22	2	0	0	0	0	0	0	144	35.0	30.0
10:00 PM	0	0	8	19	33	15	3	0	0	0	0	0	0	78	36.0	31.2
11:00 PM	0	1	1	13	13	14	3	0	0	0	0	0	0	45	38.0	32.5
Total	49	134	756	2655	1902	539	123	20	9	0	0	0	0	6187	33.0	28.9
Percent	0.79%	2.17%	12.22%	42.91%	30.74%	8.71%	1.99%	0.32%	0.15%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	11:00 AM	9:00 AM	8:00 AM	9:00 AM	7:00 AM	7:00 AM					8:00 AM
Volume	21	27	88	202	137	36	10	2	2	0	0	0	0	442

PM Peak	4:00 PM	12:00 PM	1:00 PM	5:00 PM	3:00 PM	5:00 PM	6:00 PM	1:00 PM	1:00 PM					5:00 PM
Volume	6	15	78	243	148	56	15	3	1	0	0	0	0	541

15th Percentile:	24.0 MPH	Average Speed:	28.9 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 25 MPH:	4909
85th Percentile:	33.0 MPH	Number in Pace:	4635	Percent of Vehicles > 25 MPH:	79.3%
95th Percentile:	37.0 MPH	Percent in Pace:	74.9%		

Massachusetts Avenue
between Orchard Place and Walnut Street
City, State: Arlington, MA
Client: VAI/S. Kelly
Site Code: 915



PDI File #: 228473 ATR A Speed

Count Date
Wednesday, March 16, 2022

Speed (60-minute) Combined WB and EB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	3	7	20	6	1	0	0	0	0	0	0	37	35.6	31.7
1:00 AM	0	0	1	7	9	1	0	1	0	0	0	0	0	19	33.3	30.6
2:00 AM	0	1	2	3	4	1	1	0	0	0	0	0	0	12	33.7	29.3
3:00 AM	0	0	0	1	3	6	0	0	0	0	0	0	0	10	38.0	34.4
4:00 AM	1	0	5	6	14	4	3	0	0	0	0	0	0	33	36.0	30.4
5:00 AM	1	1	9	28	46	27	8	0	0	0	0	0	0	120	37.0	31.7
6:00 AM	3	5	11	110	96	28	4	0	0	0	0	0	0	257	34.0	29.8
7:00 AM	2	19	68	282	215	33	8	2	2	0	0	0	0	631	33.0	28.8
8:00 AM	26	42	199	330	178	50	3	1	1	0	0	0	0	830	32.0	26.6
9:00 AM	3	4	66	285	246	56	10	1	0	0	0	0	0	671	33.0	29.4
10:00 AM	2	11	47	248	228	47	6	1	3	0	0	0	0	593	33.0	29.4
11:00 AM	1	4	80	339	221	44	11	4	2	0	0	0	0	706	32.3	29.0
12:00 PM	3	30	117	419	226	52	5	1	0	0	0	0	0	853	32.0	28.0
1:00 PM	6	18	144	429	209	37	9	3	1	0	0	0	0	856	32.0	27.6
2:00 PM	5	26	120	393	209	54	4	0	1	0	0	0	0	812	32.0	27.9
3:00 PM	5	11	97	388	264	44	10	3	0	0	0	0	0	822	32.9	28.6
4:00 PM	7	11	124	418	239	49	7	2	0	0	0	0	0	857	32.0	28.1
5:00 PM	4	30	114	406	280	81	11	1	0	0	0	0	0	927	33.0	28.5
6:00 PM	0	12	73	381	260	63	17	0	0	0	0	0	0	806	33.0	29.0
7:00 PM	3	18	91	291	194	37	9	1	0	0	0	0	0	644	33.0	28.4
8:00 PM	2	3	30	181	158	44	11	2	0	0	0	0	0	431	34.0	29.9
9:00 PM	0	5	20	110	94	34	4	0	0	0	0	0	0	267	34.0	29.7
10:00 PM	1	1	16	44	64	27	6	0	0	0	0	0	0	159	35.3	30.7
11:00 PM	0	1	1	25	23	20	3	0	0	0	0	0	0	73	38.0	31.9
Total	75	253	1438	5131	3500	845	151	23	10	0	0	0	0	11426	33.0	28.6
Percent	0.66%	2.21%	12.59%	44.91%	30.63%	7.40%	1.32%	0.20%	0.09%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	11:00 AM	9:00 AM	9:00 AM	11:00 AM	11:00 AM	10:00 AM					8:00 AM
Volume	26	42	199	339	246	56	11	4	3	0	0	0	0	830

PM Peak	4:00 PM	12:00 PM	1:00 PM	1:00 PM	5:00 PM	5:00 PM	6:00 PM	1:00 PM	1:00 PM					5:00 PM
Volume	7	30	144	429	280	81	17	3	1	0	0	0	0	927

15th Percentile:	24.0 MPH	Average Speed:	28.6 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 25 MPH:	8951
85th Percentile:	33.0 MPH	Number in Pace:	8828	Percent of Vehicles > 25 MPH:	78.3%
95th Percentile:	36.0 MPH	Percent in Pace:	77.3%		

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	13	3	0	16	0	48	0	48	68	17	0	85	149
7:15 AM	11	17	0	28	1	54	0	55	92	11	0	103	186
7:30 AM	19	12	0	31	9	68	0	77	88	14	0	102	210
7:45 AM	25	15	0	40	7	79	0	86	92	16	0	108	234
Total	68	47	0	115	17	249	0	266	340	58	0	398	779
8:00 AM	32	35	0	67	13	93	0	106	113	21	0	134	307
8:15 AM	48	34	0	82	14	118	0	132	131	34	0	165	379
8:30 AM	27	14	0	41	15	87	0	102	90	12	0	102	245
8:45 AM	20	6	0	26	10	89	0	99	103	11	0	114	239
Total	127	89	0	216	52	387	0	439	437	78	0	515	1170
Grand Total	195	136	0	331	69	636	0	705	777	136	0	913	1949
Approach %	58.9	41.1	0.0		9.8	90.2	0.0		85.1	14.9	0.0		
Total %	10.0	7.0	0.0	17.0	3.5	32.6	0.0	36.2	39.9	7.0	0.0	46.8	
Exiting Leg Total	205				913				831				1949
Cars	190	134	0	324	66	596	0	662	727	131	0	858	1844
% Cars	97.4	98.5	0.0	97.9	95.7	93.7	0.0	93.9	93.6	96.3	0.0	94.0	94.6
Exiting Leg Total	197				861				786				1844
Heavy Vehicles	5	2	0	7	3	40	0	43	50	5	0	55	105
% Heavy Vehicles	2.6	1.5	0.0	2.1	4.3	6.3	0.0	6.1	6.4	3.7	0.0	6.0	5.4
Exiting Leg Total	8				52				45				105

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
8:00 AM	32	35	0	67	13	93	0	106	113	21	0	134	307
8:15 AM	48	34	0	82	14	118	0	132	131	34	0	165	379
8:30 AM	27	14	0	41	15	87	0	102	90	12	0	102	245
8:45 AM	20	6	0	26	10	89	0	99	103	11	0	114	239
Total Volume	127	89	0	216	52	387	0	439	437	78	0	515	1170
% Approach Total	58.8	41.2	0.0		11.8	88.2	0.0		84.9	15.1	0.0		
PHF	0.661	0.636	0.000	0.659	0.867	0.820	0.000	0.831	0.834	0.574	0.000	0.780	0.772
Cars	125	89	0	214	50	365	0	415	419	77	0	496	1125
Cars %	98.4	100.0	0.0	99.1	96.2	94.3	0.0	94.5	95.9	98.7	0.0	96.3	96.2
Heavy Vehicles	2	0	0	2	2	22	0	24	18	1	0	19	45
Heavy Vehicles %	1.6	0.0	0.0	0.9	3.8	5.7	0.0	5.5	4.1	1.3	0.0	3.7	3.8
Cars Enter Leg	125	89	0	214	50	365	0	415	419	77	0	496	1125
Heavy Enter Leg	2	0	0	2	2	22	0	24	18	1	0	19	45
Total Entering Leg	127	89	0	216	52	387	0	439	437	78	0	515	1170
Cars Exiting Leg				127				508				490	1125
Heavy Exiting Leg				3				18				24	45
Total Exiting Leg				130				526				514	1170

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachusettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Cars**

	Brattle Street					Massachusettts Ave					Massachusetts Ave					Total
	from North					from East					from West					
	Right	Left	U-Turn		Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total			
7:00 AM	12	2	0		14	0	43	0	43	61	15	0		76	133	
7:15 AM	11	17	0		28	1	52	0	53	81	11	0		92	173	
7:30 AM	18	11	0		29	8	65	0	73	81	13	0		94	196	
7:45 AM	24	15	0		39	7	71	0	78	85	15	0		100	217	
Total	65	45	0		110	16	231	0	247	308	54	0		362	719	
8:00 AM	32	35	0		67	13	89	0	102	106	21	0		127	296	
8:15 AM	47	34	0		81	13	112	0	125	128	33	0		161	367	
8:30 AM	27	14	0		41	15	82	0	97	86	12	0		98	236	
8:45 AM	19	6	0		25	9	82	0	91	99	11	0		110	226	
Total	125	89	0		214	50	365	0	415	419	77	0		496	1125	
Grand Total	190	134	0		324	66	596	0	662	727	131	0		858	1844	
Approach %	58.6	41.4	0.0			10.0	90.0	0.0		84.7	15.3	0.0				
Total %	10.3	7.3	0.0		17.6	3.6	32.3	0.0	35.9	39.4	7.1	0.0		46.5		
Exiting Leg Total	197					861					786					1844

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Brattle Street				Massachusettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
8:00 AM	32	35	0	67	13	89	0	102	106	21	0	127	296
8:15 AM	47	34	0	81	13	112	0	125	128	33	0	161	367
8:30 AM	27	14	0	41	15	82	0	97	86	12	0	98	236
8:45 AM	19	6	0	25	9	82	0	91	99	11	0	110	226
Total Volume	125	89	0	214	50	365	0	415	419	77	0	496	1125
% Approach Total	58.4	41.6	0.0		12.0	88.0	0.0		84.5	15.5	0.0		
PHF	0.665	0.636	0.000	0.660	0.833	0.815	0.000	0.830	0.818	0.583	0.000	0.770	0.766
Entering Leg	125	89	0	214	50	365	0	415	419	77	0	496	1125
Exiting Leg				127				508				490	1125
Total				341				923				986	2250

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	1	0	2	0	5	0	5	7	2	0	9	16
7:15 AM	0	0	0	0	0	2	0	2	11	0	0	11	13
7:30 AM	1	1	0	2	1	3	0	4	7	1	0	8	14
7:45 AM	1	0	0	1	0	8	0	8	7	1	0	8	17
Total	3	2	0	5	1	18	0	19	32	4	0	36	60
8:00 AM	0	0	0	0	0	4	0	4	7	0	0	7	11
8:15 AM	1	0	0	1	1	6	0	7	3	1	0	4	12
8:30 AM	0	0	0	0	0	5	0	5	4	0	0	4	9
8:45 AM	1	0	0	1	1	7	0	8	4	0	0	4	13
Total	2	0	0	2	2	22	0	24	18	1	0	19	45
Grand Total	5	2	0	7	3	40	0	43	50	5	0	55	105
Approach %	71.4	28.6	0.0		7.0	93.0	0.0		90.9	9.1	0.0		
Total %	4.8	1.9	0.0	6.7	2.9	38.1	0.0	41.0	47.6	4.8	0.0	52.4	
Exiting Leg Total				8				52				45	105
Buses	0	1	0	1	0	15	0	15	16	0	0	16	32
% Buses	0.0	50.0	0.0	14.3	0.0	37.5	0.0	34.9	32.0	0.0	0.0	29.1	30.5
Exiting Leg Total				0				17				15	32
Single-Unit Trucks	5	1	0	6	3	23	0	26	28	5	0	33	65
% Single-Unit	100.0	50.0	0.0	85.7	100.0	57.5	0.0	60.5	56.0	100.0	0.0	60.0	61.9
Exiting Leg Total				8				29				28	65
Articulated Trucks	0	0	0	0	0	2	0	2	6	0	0	6	8
% Articulated	0.0	0.0	0.0	0.0	0.0	5.0	0.0	4.7	12.0	0.0	0.0	10.9	7.6
Exiting Leg Total				0				6				2	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	1	0	2	0	5	0	5	7	2	0	9	16
7:15 AM	0	0	0	0	0	2	0	2	11	0	0	11	13
7:30 AM	1	1	0	2	1	3	0	4	7	1	0	8	14
7:45 AM	1	0	0	1	0	8	0	8	7	1	0	8	17
Total Volume	3	2	0	5	1	18	0	19	32	4	0	36	60
% Approach Total	60.0	40.0	0.0		5.3	94.7	0.0		88.9	11.1	0.0		
PHF	0.750	0.500	0.000	0.625	0.250	0.563	0.000	0.594	0.727	0.500	0.000	0.818	0.882
Buses	0	1	0	1	0	7	0	7	9	0	0	9	17
Buses %	0.0	50.0	0.0	20.0	0.0	38.9	0.0	36.8	28.1	0.0	0.0	25.0	28.3
Single-Unit Trucks	3	1	0	4	1	11	0	12	19	4	0	23	39
Single-Unit %	100.0	50.0	0.0	80.0	100.0	61.1	0.0	63.2	59.4	100.0	0.0	63.9	65.0
Articulated Trucks	0	0	0	0	0	0	0	0	4	0	0	4	4
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	11.1	6.7
Buses	0	1	0	1	0	7	0	7	9	0	0	9	17
Single-Unit Trucks	3	1	0	4	1	11	0	12	19	4	0	23	39
Articulated Trucks	0	0	0	0	0	0	0	0	4	0	0	4	4
Total Entering Leg	3	2	0	5	1	18	0	19	32	4	0	36	60
Buses				0				10				7	17
Single-Unit Trucks				5				20				14	39
Articulated Trucks				0				4				0	4
Total Exiting Leg				5				34				21	60

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachusettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class:

Buses

	Brattle Street				Massachusettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	1	0	1	0	1	0	1	2	0	0	2	4
7:15 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
7:30 AM	0	0	0	0	0	3	0	3	3	0	0	3	6
7:45 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total	0	1	0	1	0	7	0	7	9	0	0	9	17
8:00 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
8:15 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
8:30 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
8:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	0	0	0	0	0	8	0	8	7	0	0	7	15
Grand Total	0	1	0	1	0	15	0	15	16	0	0	16	32
Approach %	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	3.1	0.0	3.1	0.0	46.9	0.0	46.9	50.0	0.0	0.0	50.0	
Exiting Leg Total	0				17				15				32

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Brattle Street				Massachusettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	0	3	0	3	3	0	0	3	6
7:45 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
8:00 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
8:15 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total Volume	0	0	0	0	0	10	0	10	9	0	0	9	19
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.833	0.750	0.000	0.000	0.750	0.792
Entering Leg	0	0	0	0	0	10	0	10	9	0	0	9	19
Exiting Leg				0				9				10	19
Total				0				19				19	38

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachusettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Brattle Street				Massachusettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	4	0	4	4	2	0	6	11
7:15 AM	0	0	0	0	0	1	0	1	8	0	0	8	9
7:30 AM	1	1	0	2	1	0	0	1	4	1	0	5	8
7:45 AM	1	0	0	1	0	6	0	6	3	1	0	4	11
Total	3	1	0	4	1	11	0	12	19	4	0	23	39
8:00 AM	0	0	0	0	0	1	0	1	3	0	0	3	4
8:15 AM	1	0	0	1	1	3	0	4	1	1	0	2	7
8:30 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
8:45 AM	1	0	0	1	1	5	0	6	3	0	0	3	10
Total	2	0	0	2	2	12	0	14	9	1	0	10	26
Grand Total	5	1	0	6	3	23	0	26	28	5	0	33	65
Approach %	83.3	16.7	0.0		11.5	88.5	0.0		84.8	15.2	0.0		
Total %	7.7	1.5	0.0	9.2	4.6	35.4	0.0	40.0	43.1	7.7	0.0	50.8	
Exiting Leg Total	8				29				28				65

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Brattle Street				Massachusettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	4	0	4	4	2	0	6	11
7:15 AM	0	0	0	0	0	1	0	1	8	0	0	8	9
7:30 AM	1	1	0	2	1	0	0	1	4	1	0	5	8
7:45 AM	1	0	0	1	0	6	0	6	3	1	0	4	11
Total Volume	3	1	0	4	1	11	0	12	19	4	0	23	39
% Approach Total	75.0	25.0	0.0		8.3	91.7	0.0		82.6	17.4	0.0		
PHF	0.750	0.250	0.000	0.500	0.250	0.458	0.000	0.500	0.594	0.500	0.000	0.719	0.886
Entering Leg	3	1	0	4	1	11	0	12	19	4	0	23	39
Exiting Leg				5				20				14	39
Total				9				32				37	78

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Brattle Street				Massachuettsts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	4	0	0	4	4
8:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	2	0	0	2	4
Grand Total	0	0	0	0	0	2	0	2	6	0	0	6	8
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	75.0	0.0	0.0	75.0	
Exiting Leg Total	0				6				2				8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
8:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	4	0	0	4	6
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.500	0.000	0.000	0.500	0.750
Entering Leg	0	0	0	0	0	2	0	2	4	0	0	4	6
Exiting Leg				0				4				2	6
Total				0				6				6	12

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuestts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Brattle Street						Massachuestts Ave						Massachusetts Ave						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:45 AM	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	2	0	2	0	0	0	0	2	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
8:15 AM	0	0	0	1	0	1	0	0	1	0	0	0	1	5	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0	0	0	0	3
Total	0	0	0	1	0	1	0	0	3	0	0	0	3	9	0	0	0	0	9
Grand Total	1	0	0	1	1	3	0	5	0	0	0	5	9	0	0	0	0	0	9
Approach %	33.3	0.0	0.0	33.3	33.3		0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
Total %	5.9	0.0	0.0	5.9	5.9	17.6	0.0	29.4	0.0	0.0	0.0	29.4	52.9	0.0	0.0	0.0	0.0	52.9	
Exiting Leg Total	2						9						6						17

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Brattle Street						Massachuestts Ave						Massachusetts Ave						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	1	0	1	0	1	0	0	0	1	5	0	0	0	0	0	5	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	3	0	0	0	0	0	3	4
Total Volume	0	0	0	1	0	1	0	3	0	0	0	3	9	0	0	0	0	0	9	13
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.750	0.000	0.000	0.000	0.750	0.450	0.000	0.000	0.000	0.000	0.000	0.450	0.464
Entering Leg	0	0	0	1	0	1	0	3	0	0	0	3	9	0	0	0	0	0	9	13
Exiting Leg	1						9						3						13	
Total	2						12						12						26	

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuestts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Pedestrians

	Brattle Street						Massachuestts Ave						Massachusetts Ave						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	4	4	0	0	0	5	0	5	0	0	0	0	0	0	9
7:15 AM	0	0	0	3	2	5	0	0	0	1	0	1	0	0	0	0	0	0	6
7:30 AM	0	0	0	3	1	4	0	0	0	5	0	5	0	0	0	1	1	2	11
7:45 AM	0	0	0	3	1	4	0	0	0	0	1	1	0	0	0	0	0	0	5
Total	0	0	0	9	8	17	0	0	0	11	1	12	0	0	0	1	1	2	31
8:00 AM	0	0	0	9	6	15	0	0	0	14	2	16	0	0	0	2	8	10	41
8:15 AM	0	0	0	7	4	11	0	0	0	12	3	15	0	0	0	0	6	6	32
8:30 AM	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0	2	1	3	10
8:45 AM	0	0	0	1	0	1	0	0	0	4	2	6	0	0	0	0	0	0	7
Total	0	0	0	17	10	27	0	0	0	35	9	44	0	0	0	4	15	19	90
Grand Total	0	0	0	26	18	44	0	0	0	46	10	56	0	0	0	5	16	21	121
Approach %	0	0	0	59.091	40.909		0	0	0	82.143	17.857		0	0	0	23.81	76.19		
Total %	0	0	0	21.488	14.876	36.364	0	0	0	38.017	8.2645	46.281	0	0	0	4.1322	13.223	17.355	
Exiting Leg Total	44						56						21						121

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Brattle Street						Massachuestts Ave							Massachusetts Ave							Total
	from North						from East							from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total			
8:00 AM	0	0	0	9	6	15	0	0	0	14	2	16	0	0	0	2	8	10	41		
8:15 AM	0	0	0	7	4	11	0	0	0	12	3	15	0	0	0	0	6	6	32		
8:30 AM	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0	2	1	3	10		
8:45 AM	0	0	0	1	0	1	0	0	0	4	2	6	0	0	0	0	0	0	7		
Total Volume	0	0	0	17	10	27	0	0	0	35	9	44	0	0	0	4	15	19	90		
% Approach Total	0.0	0.0	0.0	63.0	37.0		0.0	0.0	0.0	79.5	20.5		0.0	0.0	0.0	21.1	78.9				
PHF	0.000	0.000	0.000	0.472	0.417	0.450	0.000	0.000	0.000	0.625	0.750	0.688	0.000	0.000	0.000	0.500	0.469	0.475	0.549		
Entering Leg	0	0	0	17	10	27	0	0	0	35	9	44	0	0	0	4	15	19	90		
Exiting Leg							27													19	90
Total	54						88						38						180		

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Brattle Street				Massachuettsts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	15	12	0	27	7	99	0	106	99	24	0	123	256
4:15 PM	21	15	0	36	7	104	0	111	90	24	0	114	261
4:30 PM	16	18	0	34	15	104	0	119	101	24	0	125	278
4:45 PM	18	5	0	23	9	96	0	105	124	22	0	146	274
Total	70	50	0	120	38	403	0	441	414	94	0	508	1069
5:00 PM	13	19	0	32	11	108	0	119	124	33	0	157	308
5:15 PM	28	13	0	41	2	87	0	89	117	24	0	141	271
5:30 PM	17	13	0	30	9	89	0	98	117	19	0	136	264
5:45 PM	9	8	0	17	15	87	0	102	125	21	0	146	265
Total	67	53	0	120	37	371	0	408	483	97	0	580	1108
Grand Total	137	103	0	240	75	774	0	849	897	191	0	1088	2177
Approach %	57.1	42.9	0.0		8.8	91.2	0.0		82.4	17.6	0.0		
Total %	6.3	4.7	0.0	11.0	3.4	35.6	0.0	39.0	41.2	8.8	0.0	50.0	
Exiting Leg Total	266				1000				911				2177
Cars	137	100	0	237	74	759	0	833	877	191	0	1068	2138
% Cars	100.0	97.1	0.0	98.8	98.7	98.1	0.0	98.1	97.8	100.0	0.0	98.2	98.2
Exiting Leg Total	265				977				896				2138
Heavy Vehicles	0	3	0	3	1	15	0	16	20	0	0	20	39
% Heavy Vehicles	0.0	2.9	0.0	1.3	1.3	1.9	0.0	1.9	2.2	0.0	0.0	1.8	1.8
Exiting Leg Total	1				23				15				39

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:30 PM	16	18	0	34	15	104	0	119	101	24	0	125	278
4:45 PM	18	5	0	23	9	96	0	105	124	22	0	146	274
5:00 PM	13	19	0	32	11	108	0	119	124	33	0	157	308
5:15 PM	28	13	0	41	2	87	0	89	117	24	0	141	271
Total Volume	75	55	0	130	37	395	0	432	466	103	0	569	1131
% Approach Total	57.7	42.3	0.0		8.6	91.4	0.0		81.9	18.1	0.0		
PHF	0.670	0.724	0.000	0.793	0.617	0.914	0.000	0.908	0.940	0.780	0.000	0.906	0.918
Cars	75	54	0	129	36	384	0	420	456	103	0	559	1108
Cars %	100.0	98.2	0.0	99.2	97.3	97.2	0.0	97.2	97.9	100.0	0.0	98.2	98.0
Heavy Vehicles	0	1	0	1	1	11	0	12	10	0	0	10	23
Heavy Vehicles %	0.0	1.8	0.0	0.8	2.7	2.8	0.0	2.8	2.1	0.0	0.0	1.8	2.0
Cars Enter Leg	75	54	0	129	36	384	0	420	456	103	0	559	1108
Heavy Enter Leg	0	1	0	1	1	11	0	12	10	0	0	10	23
Total Entering Leg	75	55	0	130	37	395	0	432	466	103	0	569	1131
Cars Exiting Leg	139				510				459				1108
Heavy Exiting Leg	1				11				11				23
Total Exiting Leg	140				521				470				1131

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuestts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars**

	Brattle Street				Massachuestts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	15	11	0	26	7	98	0	105	95	24	0	119	250
4:15 PM	21	14	0	35	7	103	0	110	86	24	0	110	255
4:30 PM	16	18	0	34	14	100	0	114	99	24	0	123	271
4:45 PM	18	5	0	23	9	92	0	101	120	22	0	142	266
Total	70	48	0	118	37	393	0	430	400	94	0	494	1042
5:00 PM	13	18	0	31	11	107	0	118	123	33	0	156	305
5:15 PM	28	13	0	41	2	85	0	87	114	24	0	138	266
5:30 PM	17	13	0	30	9	88	0	97	116	19	0	135	262
5:45 PM	9	8	0	17	15	86	0	101	124	21	0	145	263
Total	67	52	0	119	37	366	0	403	477	97	0	574	1096
Grand Total	137	100	0	237	74	759	0	833	877	191	0	1068	2138
Approach %	57.8	42.2	0.0		8.9	91.1	0.0		82.1	17.9	0.0		
Total %	6.4	4.7	0.0	11.1	3.5	35.5	0.0	39.0	41.0	8.9	0.0	50.0	
Exiting Leg Total	265				977				896				2138

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Brattle Street				Massachuestts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:30 PM	16	18	0	34	14	100	0	114	99	24	0	123	271
4:45 PM	18	5	0	23	9	92	0	101	120	22	0	142	266
5:00 PM	13	18	0	31	11	107	0	118	123	33	0	156	305
5:15 PM	28	13	0	41	2	85	0	87	114	24	0	138	266
Total Volume	75	54	0	129	36	384	0	420	456	103	0	559	1108
% Approach Total	58.1	41.9	0.0		8.6	91.4	0.0		81.6	18.4	0.0		
PHF	0.670	0.750	0.000	0.787	0.643	0.897	0.000	0.890	0.927	0.780	0.000	0.896	0.908
Entering Leg	75	54	0	129	36	384	0	420	456	103	0	559	1108
Exiting Leg				139				510				459	1108
Total				268				930				1018	2216

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	1	0	1	0	1	0	1	4	0	0	4	6
4:15 PM	0	1	0	1	0	1	0	1	4	0	0	4	6
4:30 PM	0	0	0	0	1	4	0	5	2	0	0	2	7
4:45 PM	0	0	0	0	0	4	0	4	4	0	0	4	8
Total	0	2	0	2	1	10	0	11	14	0	0	14	27
5:00 PM	0	1	0	1	0	1	0	1	1	0	0	1	3
5:15 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
5:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	1	0	1	0	5	0	5	6	0	0	6	12
Grand Total	0	3	0	3	1	15	0	16	20	0	0	20	39
Approach %	0.0	100.0	0.0		6.3	93.8	0.0		100.0	0.0	0.0		
Total %	0.0	7.7	0.0	7.7	2.6	38.5	0.0	41.0	51.3	0.0	0.0	51.3	
Exiting Leg Total	1				23				15				39
Buses	0	1	0	1	0	9	0	9	10	0	0	10	20
% Buses	0.0	33.3	0.0	33.3	0.0	60.0	0.0	56.3	50.0	0.0	0.0	50.0	51.3
Exiting Leg Total	0				11				9				20
Single-Unit Trucks	0	2	0	2	1	6	0	7	9	0	0	9	18
% Single-Unit	0.0	66.7	0.0	66.7	100.0	40.0	0.0	43.8	45.0	0.0	0.0	45.0	46.2
Exiting Leg Total	1				11				6				18
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	5.0	2.6
Exiting Leg Total	0				1				0				1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Brattle Street				Massachuettsts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	1	0	1	0	1	0	1	4	0	0	4	6
4:15 PM	0	1	0	1	0	1	0	1	4	0	0	4	6
4:30 PM	0	0	0	0	1	4	0	5	2	0	0	2	7
4:45 PM	0	0	0	0	0	4	0	4	4	0	0	4	8
Total Volume	0	2	0	2	1	10	0	11	14	0	0	14	27
% Approach Total	0.0	100.0	0.0		9.1	90.9	0.0		100.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.500	0.250	0.625	0.000	0.550	0.875	0.000	0.000	0.875	0.844
Buses	0	1	0	1	0	6	0	6	6	0	0	6	13
Buses %	0.0	50.0	0.0	50.0	0.0	60.0	0.0	54.5	42.9	0.0	0.0	42.9	48.1
Single-Unit Trucks	0	1	0	1	1	4	0	5	7	0	0	7	13
Single-Unit %	0.0	50.0	0.0	50.0	100.0	40.0	0.0	45.5	50.0	0.0	0.0	50.0	48.1
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	7.1	3.7
Buses	0	1	0	1	0	6	0	6	6	0	0	6	13
Single-Unit Trucks	0	1	0	1	1	4	0	5	7	0	0	7	13
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Entering Leg	0	2	0	2	1	10	0	11	14	0	0	14	27
Buses				0				7				6	13
Single-Unit Trucks				1				8				4	13
Articulated Trucks				0				1				0	1
Total Exiting Leg				1				16				10	27

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Buses

	Brattle Street				Massachuettsts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	1	0	1	0	1	0	1	2	0	0	2	4
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	3	0	3	2	0	0	2	5
Total	0	1	0	1	0	6	0	6	6	0	0	6	13
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
5:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	0	0	0	3	0	3	4	0	0	4	7
Grand Total	0	1	0	1	0	9	0	9	10	0	0	10	20
Approach %	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	5.0	0.0	5.0	0.0	45.0	0.0	45.0	50.0	0.0	0.0	50.0	
Exiting Leg Total	0				11				9				20

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	1	0	1	0	1	0	1	2	0	0	2	4
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	3	0	3	2	0	0	2	5
Total Volume	0	1	0	1	0	6	0	6	6	0	0	6	13
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.500	0.750	0.000	0.000	0.750	0.650
Entering Leg	0	1	0	1	0	6	0	6	6	0	0	6	13
Exiting Leg				0				7				6	13
Total				1				13				12	26

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
4:15 PM	0	1	0	1	0	1	0	1	2	0	0	2	4
4:30 PM	0	0	0	0	1	2	0	3	1	0	0	1	4
4:45 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	0	1	0	1	1	4	0	5	7	0	0	7	13
5:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	2	0	2	2	0	0	2	5
Grand Total	0	2	0	2	1	6	0	7	9	0	0	9	18
Approach %	0.0	100.0	0.0		14.3	85.7	0.0		100.0	0.0	0.0		
Total %	0.0	11.1	0.0	11.1	5.6	33.3	0.0	38.9	50.0	0.0	0.0	50.0	
Exiting Leg Total	1				11				6				18

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
4:15 PM	0	1	0	1	0	1	0	1	2	0	0	2	4
4:30 PM	0	0	0	0	1	2	0	3	1	0	0	1	4
4:45 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total Volume	0	1	0	1	1	4	0	5	7	0	0	7	13
% Approach Total	0.0	100.0	0.0		20.0	80.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.250	0.500	0.000	0.417	0.875	0.000	0.000	0.875	0.813
Entering Leg	0	1	0	1	1	4	0	5	7	0	0	7	13
Exiting Leg				1				8				4	13
Total				2				13				11	26

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Articulated Trucks

	Brattle Street				Massachuettsts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	1
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0				1				0				1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Brattle Street				Massachuettts Ave				Massachusetts Ave				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	1
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	1	0	0	1	1
Exiting Leg				0				1				0	1
Total				0				1				1	2

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuettts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Brattle Street						Massachuettts Ave						Massachusetts Ave						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	3	0	0	0	0	3	5
4:30 PM	0	1	0	0	0	1	1	1	0	0	0	2	2	0	0	0	0	2	5
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	4	0	0	0	1	5	6
Total	0	1	0	0	0	1	2	4	0	0	0	6	10	0	0	0	1	11	18
5:00 PM	0	2	0	0	0	2	0	1	0	1	0	2	2	0	0	0	0	2	6
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	2	1	0	0	0	3	5
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	8	0	0	0	0	8	10
5:45 PM	0	0	0	0	0	0	0	5	0	0	0	5	6	0	0	0	0	6	11
Total	0	2	0	0	0	2	0	10	0	1	0	11	18	1	0	0	0	19	32
Grand Total	0	3	0	0	0	3	2	14	0	1	0	17	28	1	0	0	1	30	50
Approach %	0.0	100.0	0.0	0.0	0.0		11.8	82.4	0.0	5.9	0.0		93.3	3.3	0.0	0.0	3.3		
Total %	0.0	6.0	0.0	0.0	0.0	6.0	4.0	28.0	0.0	2.0	0.0	34.0	56.0	2.0	0.0	0.0	2.0	60.0	
Exiting Leg Total	3						32						15						50

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Brattle Street						Massachuettts Ave						Massachusetts Ave						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
5:00 PM	0	2	0	0	0	2	0	1	0	1	0	2	2	0	0	0	0	0	2	6
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	2	1	0	0	0	0	3	5
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	8	0	0	0	0	0	8	10
5:45 PM	0	0	0	0	0	0	0	5	0	0	0	5	6	0	0	0	0	0	6	11
Total Volume	0	2	0	0	0	2	0	10	0	1	0	11	18	1	0	0	0	0	19	32
% Approach Total	0.0	100.0	0.0	0.0	0.0		0.0	90.9	0.0	9.1	0.0		94.7	5.3	0.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.250	0.000	0.550	0.563	0.250	0.000	0.000	0.000	0.594		0.727
Entering Leg	0	2	0	0	0	2	0	10	0	1	0	11	18	1	0	0	0	19		32
Exiting Leg	1						21						10						32	
Total	3						32						29						64	

PDI File #: **228473 A**
 Location: **N: Brattle Street**
 Location: **E: Massachuestts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Pedestrians

	Brattle Street						Massachuestts Ave						Massachusetts Ave						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	3	8	11	0	0	0	5	0	5	0	0	0	0	0	0	0	16
4:15 PM	0	0	0	4	3	7	0	0	0	0	2	2	0	0	0	0	1	1	10	
4:30 PM	0	0	0	1	4	5	0	0	0	2	0	2	0	0	0	3	1	4	11	
4:45 PM	0	0	0	3	3	6	0	0	0	2	0	2	0	0	0	0	1	1	9	
Total	0	0	0	11	18	29	0	0	0	9	2	11	0	0	0	3	3	6	46	
5:00 PM	0	0	0	2	7	9	0	0	0	0	1	1	0	0	0	0	0	0	10	
5:15 PM	0	0	0	3	3	6	0	0	0	1	1	2	0	0	0	1	1	2	10	
5:30 PM	0	0	0	3	4	7	0	0	0	1	0	1	0	0	0	1	4	5	13	
5:45 PM	0	0	0	2	5	7	0	0	0	4	6	10	0	0	0	0	0	0	17	
Total	0	0	0	10	19	29	0	0	0	6	8	14	0	0	0	2	5	7	50	
Grand Total	0	0	0	21	37	58	0	0	0	15	10	25	0	0	0	5	8	13	96	
Approach %	0	0	0	36.207	63.793		0	0	0	60	40		0	0	0	38.462	61.538			
Total %	0	0	0	21.875	38.542	60.417	0	0	0	15.625	10.417	26.042	0	0	0	5.2083	8.3333	13.542		
Exiting Leg Total	58						25						13						96	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Brattle Street						Massachuestts Ave						Massachusetts Ave						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	2	7	9	0	0	0	0	1	1	0	0	0	0	0	0	10
5:15 PM	0	0	0	3	3	6	0	0	0	1	1	2	0	0	0	1	1	2	10
5:30 PM	0	0	0	3	4	7	0	0	0	1	0	1	0	0	0	1	4	5	13
5:45 PM	0	0	0	2	5	7	0	0	0	4	6	10	0	0	0	0	0	0	17
Total Volume	0	0	0	10	19	29	0	0	0	6	8	14	0	0	0	2	5	7	50
% Approach Total	0.0	0.0	0.0	34.5	65.5		0.0	0.0	0.0	42.9	57.1		0.0	0.0	0.0	28.6	71.4		
PHF	0.000	0.000	0.000	0.833	0.679	0.806	0.000	0.000	0.000	0.375	0.333	0.350	0.000	0.000	0.000	0.500	0.313	0.350	0.735
Entering Leg	0	0	0	10	19	29	0	0	0	6	8	14	0	0	0	2	5	7	50
Exiting Leg	29						14						7						50
Total	58						28						14						100

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	45	1	0	46	1	0	2	0	3	1	71	0	0	72	121
7:15 AM	0	0	2	0	2	1	58	1	0	60	0	0	0	0	0	4	104	0	0	108	170
7:30 AM	0	0	0	0	0	0	74	2	0	76	1	0	1	0	2	0	98	0	0	98	176
7:45 AM	1	0	0	0	1	0	85	1	0	86	3	0	1	0	4	6	100	0	0	106	197
Total	1	0	2	0	3	1	262	5	0	268	5	0	4	0	9	11	373	0	0	384	664
8:00 AM	2	0	0	0	2	0	102	2	0	104	3	0	2	0	5	12	136	0	1	149	260
8:15 AM	0	0	1	0	1	0	131	3	0	134	2	0	2	0	4	6	165	0	0	171	310
8:30 AM	0	0	0	0	0	1	96	2	0	99	2	0	3	0	5	4	97	0	1	102	206
8:45 AM	0	1	0	0	1	0	99	1	0	100	3	0	2	0	5	4	108	0	0	112	218
Total	2	1	1	0	4	1	428	8	0	437	10	0	9	0	19	26	506	0	2	534	994
Grand Total	3	1	3	0	7	2	690	13	0	705	15	0	13	0	28	37	879	0	2	918	1658
Approach %	42.9	14.3	42.9	0.0		0.3	97.9	1.8	0.0		53.6	0.0	46.4	0.0		4.0	95.8	0.0	0.2		
Total %	0.2	0.1	0.2	0.0	0.4	0.1	41.6	0.8	0.0	42.5	0.9	0.0	0.8	0.0	1.7	2.2	53.0	0.0	0.1	55.4	
Exiting Leg Total	2					897					51					708					1658
Cars	3	1	3	0	7	2	649	13	0	664	15	0	13	0	28	37	828	0	2	867	1566
% Cars	100.0	100.0	100.0	0.0	100.0	100.0	94.1	100.0	0.0	94.2	100.0	0.0	100.0	0.0	100.0	100.0	94.2	0.0	100.0	94.4	94.5
Exiting Leg Total	2					846					51					667					1566
Heavy Vehicles	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	0	51	0	0	51	92
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	5.6	5.5
Exiting Leg Total	0					51					0					41					92

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	2	0	0	0	2	0	102	2	0	104	3	0	2	0	5	12	136	0	1	149	260
8:15 AM	0	0	1	0	1	0	131	3	0	134	2	0	2	0	4	6	165	0	0	171	310
8:30 AM	0	0	0	0	0	1	96	2	0	99	2	0	3	0	5	4	97	0	1	102	206
8:45 AM	0	1	0	0	1	0	99	1	0	100	3	0	2	0	5	4	108	0	0	112	218
Total Volume	2	1	1	0	4	1	428	8	0	437	10	0	9	0	19	26	506	0	2	534	994
% Approach Total	50.0	25.0	25.0	0.0		0.2	97.9	1.8	0.0		52.6	0.0	47.4	0.0		4.9	94.8	0.0	0.4		
PHF	0.250	0.250	0.250	0.000	0.500	0.250	0.817	0.667	0.000	0.815	0.833	0.000	0.750	0.000	0.950	0.542	0.767	0.000	0.500	0.781	0.802
Cars	2	1	1	0	4	1	405	8	0	414	10	0	9	0	19	26	488	0	2	516	953
Cars %	100.0	100.0	100.0	0.0	100.0	100.0	94.6	100.0	0.0	94.7	100.0	0.0	100.0	0.0	100.0	100.0	96.4	0.0	100.0	96.6	95.9
Heavy Vehicles	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	18	0	0	18	41
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.4	4.1
Cars Enter Leg	2	1	1	0	4	1	405	8	0	414	10	0	9	0	19	26	488	0	2	516	953
Heavy Enter Leg	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	18	0	0	18	41
Total Entering Leg	2	1	1	0	4	1	428	8	0	437	10	0	9	0	19	26	506	0	2	534	994
Cars Exiting Leg	1					499					35					418					953
Heavy Exiting Leg	0					18					0					23					41
Total Exiting Leg	1					517					35					441					994

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	41	1	0	42	1	0	2	0	3	1	63	0	0	64	109
7:15 AM	0	0	2	0	2	1	56	1	0	58	0	0	0	0	0	4	93	0	0	97	157
7:30 AM	0	0	0	0	0	0	70	2	0	72	1	0	1	0	2	0	90	0	0	90	164
7:45 AM	1	0	0	0	1	0	77	1	0	78	3	0	1	0	4	6	94	0	0	100	183
Total	1	0	2	0	3	1	244	5	0	250	5	0	4	0	9	11	340	0	0	351	613
8:00 AM	2	0	0	0	2	0	98	2	0	100	3	0	2	0	5	12	129	0	1	142	249
8:15 AM	0	0	1	0	1	0	124	3	0	127	2	0	2	0	4	6	162	0	0	168	300
8:30 AM	0	0	0	0	0	1	91	2	0	94	2	0	3	0	5	4	93	0	1	98	197
8:45 AM	0	1	0	0	1	0	92	1	0	93	3	0	2	0	5	4	104	0	0	108	207
Total	2	1	1	0	4	1	405	8	0	414	10	0	9	0	19	26	488	0	2	516	953
Grand Total	3	1	3	0	7	2	649	13	0	664	15	0	13	0	28	37	828	0	2	867	1566
Approach %	42.9	14.3	42.9	0.0		0.3	97.7	2.0	0.0		53.6	0.0	46.4	0.0		4.3	95.5	0.0	0.2		
Total %	0.2	0.1	0.2	0.0	0.4	0.1	41.4	0.8	0.0	42.4	1.0	0.0	0.8	0.0	1.8	2.4	52.9	0.0	0.1	55.4	
Exiting Leg Total	2					846					51					667					1566

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	0	0	0	2	0	98	2	0	100	3	0	2	0	5	12	129	0	1	142	249
8:15 AM	0	0	1	0	1	0	124	3	0	127	2	0	2	0	4	6	162	0	0	168	300
8:30 AM	0	0	0	0	0	1	91	2	0	94	2	0	3	0	5	4	93	0	1	98	197
8:45 AM	0	1	0	0	1	0	92	1	0	93	3	0	2	0	5	4	104	0	0	108	207
Total Volume	2	1	1	0	4	1	405	8	0	414	10	0	9	0	19	26	488	0	2	516	953
% Approach Total	50.0	25.0	25.0	0.0		0.2	97.8	1.9	0.0		52.6	0.0	47.4	0.0		5.0	94.6	0.0	0.4		
PHF	0.250	0.250	0.250	0.000	0.500	0.250	0.817	0.667	0.000	0.815	0.833	0.000	0.750	0.000	0.950	0.542	0.753	0.000	0.500	0.768	0.794
Entering Leg	2	1	1	0	4	1	405	8	0	414	10	0	9	0	19	26	488	0	2	516	953
Exiting Leg	1					499					35					418					953
Total	5					913					54					934					1906

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	0	8	12
7:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	11	0	0	0	11	13
7:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	0	8	12
7:45 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	6	0	0	0	6	14
Total	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	33	0	0	0	33	51
8:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7	0	0	0	7	11
8:15 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	3	0	0	0	3	10
8:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	0	4	9
8:45 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	0	4	11
Total	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	18	0	0	0	18	41
Grand Total	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	0	51	0	0	0	51	92
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	44.6	0.0	0.0	44.6	0.0	0.0	0.0	0.0	0.0	0.0	55.4	0.0	0.0	0.0	55.4	
Exiting Leg Total	0					51					0					41					92	
Buses	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	17	0	0	0	17	31
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	34.1	0.0	0.0	34.1	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	33.7
Exiting Leg Total	0					17					0					14					31	
Single-Unit Trucks	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	29	0	0	0	29	54
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	61.0	0.0	0.0	61.0	0.0	0.0	0.0	0.0	0.0	0.0	56.9	0.0	0.0	0.0	56.9	58.7
Exiting Leg Total	0					29					0					25					54	
Articulated Trucks	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	0	5	7
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	9.8	7.6
Exiting Leg Total	0					5					0					2					7	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	0	8	12
7:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	11	0	0	0	11	13
7:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	0	8	12
7:45 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	6	0	0	0	6	14
Total Volume	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	33	0	0	0	33	51
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.911	
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	10	0	0	0	10	16
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	30.3	0.0	0.0	0.0	30.3	31.4
Single-Unit Trucks	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	20	0	0	0	20	32
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	60.6	0.0	0.0	0.0	60.6	62.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	9.1	5.9
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	10	0	0	0	10	16
Single-Unit Trucks	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	20	0	0	0	20	32
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
Total Entering Leg	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	33	0	0	0	33	51
Buses	0					10					0					6					16	
Single-Unit Trucks	0					20					0					12					32	
Articulated Trucks	0					3					0					0					3	
Total Exiting Leg	0					33					0					18					51	

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	2
7:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	3	0	0	3
7:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	10	0	0	10
8:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	2	0	0	2
8:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	2
8:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	7	0	0	7
Grand Total	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	0	17	0	0	17
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	45.2	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	0.0	54.8	0.0	0.0	54.8	
Exiting Leg Total	0					17					0					14					31

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	6
7:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4
8:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	2	5
8:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4
Total Volume	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	9	0	0	0	9	19
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.792	
Entering Leg	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	9	0	0	0	9	19
Exiting Leg	0					9					0					10					19	
Total	0					19					0					19					38	

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	8	0	0	8	9
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6
7:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	8
Total	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	20	0	0	20	32
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4
8:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
8:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
8:45 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	8
Total	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	9	0	0	9	22
Grand Total	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	29	0	0	29	54
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	46.3	0.0	0.0	46.3	0.0	0.0	0.0	0.0	0.0	0.0	53.7	0.0	0.0	53.7	
Exiting Leg Total	0					29					0					25					54

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9	
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	8	0	0	8	9	
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6	
7:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	8	
Total Volume	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	20	0	0	20	32	
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.889	
Entering Leg	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	20	0	0	20	32	
Exiting Leg																					12	32
Total	0					32					0					32					64	

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	4
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	0	7
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	0.0	71.4
Exiting Leg Total	0					5					0					2					7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	0	4
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.750
Entering Leg	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	0	4
Exiting Leg					0					4					0					2	6
Total					0					6					0					6	12

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	9	0	0	0	0	0	9
Grand Total	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0	13	0	0	0	0	0	13
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.8	0.0	0.0	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.2	0.0	0.0	0.0	0.0	72.2	
Exiting Leg Total	0							13							0							5							18

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	5	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	3	4
Total Volume	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	9	0	0	0	0	9	12
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	0.000	0.000	0.000	0.450	0.500	
Entering Leg	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	9	0	0	0	0	9	12
Exiting Leg	0							9							0							3							12
Total	0							12							0							12							24

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	10
7:15 AM	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	0	11
7:30 AM	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	13
7:45 AM	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	10
Total	0	0	0	0	12	11	23	0	0	0	0	0	0	0	0	0	0	0	5	16	21	0	0	0	0	0	0	0	44
8:00 AM	0	0	0	0	7	4	11	0	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	0	19
8:15 AM	0	0	0	0	9	2	11	0	0	0	0	0	0	0	0	0	0	0	7	2	9	0	0	0	0	0	0	0	20
8:30 AM	0	0	0	0	3	4	7	0	0	0	0	1	0	1	0	0	0	0	3	5	8	0	0	0	0	1	0	1	17
8:45 AM	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	0	0	0	7
Total	0	0	0	0	20	11	31	0	0	0	0	1	0	1	0	0	0	0	16	14	30	0	0	0	0	1	0	1	63
Grand Total	0	0	0	0	32	22	54	0	0	0	0	1	0	1	0	0	0	0	21	30	51	0	0	0	0	1	0	1	107
Approach %	0	0	0	0	59.3	40.7		0	0	0	0	100	0		0	0	0	0	41.2	58.8		0	0	0	0	100	0		
Total %	0	0	0	0	29.9	20.6	50.5	0	0	0	0	0.93	0	0.93	0	0	0	0	19.6	28	47.7	0	0	0	0	0.93	0	0.93	
Exiting Leg Total	54							1							51							1							107

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:45 AM	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	10
8:00 AM	0	0	0	0	7	4	11	0	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	0	19
8:15 AM	0	0	0	0	9	2	11	0	0	0	0	0	0	0	0	0	0	0	7	2	9	0	0	0	0	0	0	0	20
8:30 AM	0	0	0	0	3	4	7	0	0	0	0	1	0	1	0	0	0	0	3	5	8	0	0	0	0	1	0	1	17
Total Volume	0	0	0	0	23	12	35	0	0	0	0	1	0	1	0	0	0	0	15	14	29	0	0	0	0	1	0	1	66
% Approach Total	0.0	0.0	0.0	0.0	65.7	34.3		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	51.7	48.3		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.639	0.750	0.795	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.536	0.700	0.806	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.825
Entering Leg	0	0	0	0	23	12	35	0	0	0	0	1	0	1	0	0	0	0	15	14	29	0	0	0	0	1	0	1	66
Exiting Leg	35							1							29							1							66
Total	70							2							58							2							132

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	1	0	1	1	106	2	0	109	1	0	0	0	1	1	113	0	0	114	225
4:15 PM	0	0	0	0	0	0	111	1	0	112	3	0	1	0	4	9	97	0	0	106	222
4:30 PM	1	0	0	0	1	1	111	1	0	113	3	0	6	0	9	5	116	0	0	121	244
4:45 PM	0	0	0	0	0	1	103	1	0	105	7	0	1	0	8	5	120	1	0	126	239
Total	1	0	1	0	2	3	431	5	0	439	14	0	8	0	22	20	446	1	0	467	930
5:00 PM	0	0	0	0	0	0	114	4	0	118	9	0	4	0	13	9	140	0	0	149	280
5:15 PM	0	0	0	0	0	0	92	3	0	95	6	0	0	0	6	5	124	1	0	130	231
5:30 PM	1	0	0	0	1	0	96	3	0	99	7	0	0	0	7	3	126	1	0	130	237
5:45 PM	0	0	0	0	0	0	94	6	0	100	8	0	5	0	13	2	131	0	0	133	246
Total	1	0	0	0	1	0	396	16	0	412	30	0	9	0	39	19	521	2	0	542	994
Grand Total	2	0	1	0	3	3	827	21	0	851	44	0	17	0	61	39	967	3	0	1009	1924
Approach %	66.7	0.0	33.3	0.0		0.4	97.2	2.5	0.0		72.1	0.0	27.9	0.0		3.9	95.8	0.3	0.0		
Total %	0.1	0.0	0.1	0.0	0.2	0.2	43.0	1.1	0.0	44.2	2.3	0.0	0.9	0.0	3.2	2.0	50.3	0.2	0.0	52.4	
Exiting Leg Total	6					1012					60					846					1924
Cars	2	0	1	0	3	3	812	21	0	836	43	0	17	0	60	39	944	3	0	986	1885
% Cars	100.0	0.0	100.0	0.0	100.0	100.0	98.2	100.0	0.0	98.2	97.7	0.0	100.0	0.0	98.4	100.0	97.6	100.0	0.0	97.7	98.0
Exiting Leg Total	6					988					60					831					1885
Heavy Vehicles	0	0	0	0	0	0	15	0	0	15	1	0	0	0	1	0	23	0	0	23	39
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8	2.3	0.0	0.0	0.0	1.6	0.0	2.4	0.0	0.0	2.3	2.0
Exiting Leg Total	0					24					0					15					39

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave									
	from North					from East					from South					from West									
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total					
4:30 PM	1	0	0	0	1	1	111	1	0	113	3	0	6	0	9	5	116	0	0	121	244				
4:45 PM	0	0	0	0	0	1	103	1	0	105	7	0	1	0	8	5	120	1	0	126	239				
5:00 PM	0	0	0	0	0	0	114	4	0	118	9	0	4	0	13	9	140	0	0	149	280				
5:15 PM	0	0	0	0	0	0	92	3	0	95	6	0	0	0	6	5	124	1	0	130	231				
Total Volume	1	0	0	0	1	2	420	9	0	431	25	0	11	0	36	24	500	2	0	526	994				
% Approach Total	100.0	0.0	0.0	0.0		0.5	97.4	2.1	0.0		69.4	0.0	30.6	0.0		4.6	95.1	0.4	0.0						
PHF	0.250	0.000	0.000	0.000	0.250	0.500	0.921	0.563	0.000	0.913	0.694	0.000	0.458	0.000	0.692	0.667	0.893	0.500	0.000	0.883	0.888				
Cars	1	0	0	0	1	2	410	9	0	421	25	0	11	0	36	24	489	2	0	515	973				
Cars %	100.0	0.0	0.0	0.0	100.0	100.0	97.6	100.0	0.0	97.7	100.0	0.0	100.0	0.0	100.0	100.0	97.8	100.0	0.0	97.9	97.9				
Heavy Vehicles	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	21				
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.1	2.1				
Cars Enter Leg	1	0	0	0	1	2	410	9	0	421	25	0	11	0	36	24	489	2	0	515	973				
Heavy Enter Leg	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	21				
Total Entering Leg	1	0	0	0	1	2	420	9	0	431	25	0	11	0	36	24	500	2	0	526	994				
Cars Exiting Leg																									
Heavy Exiting Leg																									
Total Exiting Leg																									

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	1	0	1	1	105	2	0	108	1	0	0	0	1	1	108	0	0	109	219
4:15 PM	0	0	0	0	0	0	109	1	0	110	3	0	1	0	4	9	92	0	0	101	215
4:30 PM	1	0	0	0	1	1	108	1	0	110	3	0	6	0	9	5	114	0	0	119	239
4:45 PM	0	0	0	0	0	1	99	1	0	101	7	0	1	0	8	5	116	1	0	122	231
Total	1	0	1	0	2	3	421	5	0	429	14	0	8	0	22	20	430	1	0	451	904
5:00 PM	0	0	0	0	0	0	113	4	0	117	9	0	4	0	13	9	138	0	0	147	277
5:15 PM	0	0	0	0	0	0	90	3	0	93	6	0	0	0	6	5	121	1	0	127	226
5:30 PM	1	0	0	0	1	0	95	3	0	98	6	0	0	0	6	3	125	1	0	129	234
5:45 PM	0	0	0	0	0	0	93	6	0	99	8	0	5	0	13	2	130	0	0	132	244
Total	1	0	0	0	1	0	391	16	0	407	29	0	9	0	38	19	514	2	0	535	981
Grand Total	2	0	1	0	3	3	812	21	0	836	43	0	17	0	60	39	944	3	0	986	1885
Approach %	66.7	0.0	33.3	0.0		0.4	97.1	2.5	0.0		71.7	0.0	28.3	0.0		4.0	95.7	0.3	0.0		
Total %	0.1	0.0	0.1	0.0	0.2	0.2	43.1	1.1	0.0	44.4	2.3	0.0	0.9	0.0	3.2	2.1	50.1	0.2	0.0	52.3	
Exiting Leg Total	6					988					60					831					1885

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	113	4	0	117	9	0	4	0	13	9	138	0	0	147	277
5:15 PM	0	0	0	0	0	0	90	3	0	93	6	0	0	0	6	5	121	1	0	127	226
5:30 PM	1	0	0	0	1	0	95	3	0	98	6	0	0	0	6	3	125	1	0	129	234
5:45 PM	0	0	0	0	0	0	93	6	0	99	8	0	5	0	13	2	130	0	0	132	244
Total Volume	1	0	0	0	1	0	391	16	0	407	29	0	9	0	38	19	514	2	0	535	981
% Approach Total	100.0	0.0	0.0	0.0		0.0	96.1	3.9	0.0		76.3	0.0	23.7	0.0		3.6	96.1	0.4	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.865	0.667	0.000	0.870	0.806	0.000	0.450	0.000	0.731	0.528	0.931	0.500	0.000	0.910	0.885
Entering Leg	1	0	0	0	1	0	391	16	0	407	29	0	9	0	38	19	514	2	0	535	981
Exiting Leg					2					543					35					401	981
Total					3					950					73					936	1962

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	7
4:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
4:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
Total	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	16	0	0	16	26
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
5:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	3
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	7	0	0	7	13
Grand Total	0	0	0	0	0	0	15	0	0	15	1	0	0	0	1	0	23	0	0	23	39
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	38.5	0.0	0.0	38.5	2.6	0.0	0.0	0.0	2.6	0.0	59.0	0.0	0.0	59.0	
Exiting Leg Total	0					24					0					15					39
Buses	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	11	0	0	11	20
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	47.8	0.0	0.0	47.8	51.3
Exiting Leg Total	0					11					0					9					20
Single-Unit Trucks	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	11	0	0	11	18
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	40.0	100.0	0.0	0.0	0.0	100.0	0.0	47.8	0.0	0.0	47.8	46.2
Exiting Leg Total	0					12					0					6					18
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	2.6
Exiting Leg Total	0					1					0					0					1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	7
4:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
4:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
Total Volume	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	16	0	0	16	26
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.800	0.000	0.000	0.800	0.813
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	13
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	43.8	0.0	0.0	43.8	50.0
Single-Unit Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	12
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	46.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	6.3	3.8
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	13
Single-Unit Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	12
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Entering Leg	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	16	0	0	16	26
Buses	0					7					0					6					13
Single-Unit Trucks	0					8					0					4					12
Articulated Trucks	0					1					0					0					1
Total Exiting Leg	0					16					0					10					26

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Buses

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
4:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	13
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7
Grand Total	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	11	0	0	11	20
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	55.0	0.0	0.0	55.0	
Exiting Leg Total	0					11					0					9					20

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	0	3	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
4:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	2	5
Total Volume	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	0	7	13
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.650	
Entering Leg	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	0	7	13
Exiting Leg	0					7					0					6					13	
Total	0					13					0					13					26	

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	
4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	12	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	1	2	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1	0	3	0	0	3	6
Grand Total	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	11	0	0	11	18	
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	5.6	0.0	0.0	0.0	5.6	0.0	61.1	0.0	0.0	61.1		
Exiting Leg Total	0					12					0					6					18	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	0	3	5
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	2	3
Total Volume	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	0	8	12
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.667	0.600	
Entering Leg	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	0	8	12
Exiting Leg	0					8					0					4					12	
Total	0					12					0					12						

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total	0					1					0					0					1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					Massachusetts Ave					Menotomy Road					Massachusetts Ave					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Exiting Leg	0					1					0					0					1
Total	0					1					0					1					2

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	5
4:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	4
4:45 PM	0	0	0	0	0	2	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	7
Total	0	0	0	0	0	2	2	1	5	0	0	0	0	6	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	18
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	2	0	5	0	0	0	0	0	5	8
5:15 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	4
5:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	10
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	11
Total	0	0	0	0	0	0	0	0	10	0	0	0	0	10	1	0	0	0	0	1	2	0	21	0	0	0	0	0	21	33
Grand Total	0	0	0	0	0	2	2	1	15	0	0	0	0	16	1	0	0	0	0	1	2	0	31	0	0	0	0	0	31	51
Approach %	0.0	0.0	0.0	0.0	0.0	100.0		6.3	93.8	0.0	0.0	0.0	0.0		50.0	0.0	0.0	0.0	0.0	50.0		0.0	100.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	3.9	3.9	2.0	29.4	0.0	0.0	0.0	0.0	31.4	2.0	0.0	0.0	0.0	0.0	2.0	3.9	0.0	60.8	0.0	0.0	0.0	0.0	0.0	60.8	
Exiting Leg Total	3							32							1							15							51	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	2	0	5	0	0	0	0	5	8
5:15 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	2	4
5:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	8	10
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	6	0	0	0	0	6	11
Total Volume	0	0	0	0	0	0	0	0	10	0	0	0	0	10	1	0	0	0	0	1	2	0	21	0	0	0	0	21	33
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.656	0.000	0.000	0.000	0.000	0.656	0.750
Entering Leg	0	0	0	0	0	0	0	0	10	0	0	0	0	10	1	0	0	0	0	1	2	0	21	0	0	0	0	21	33
Exiting Leg	0							22							1							10							33
Total	0							32							3							31							66

PDI File #: **228473 B**
 Location: **N: Driveway S: Menotomy Road**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	3	12	15	0	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	0	21
4:15 PM	0	0	0	0	5	5	10	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	1	0	1	16
4:30 PM	0	0	0	0	5	9	14	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	0	19
4:45 PM	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	4	5	9	0	0	0	0	0	0	0	17
Total	0	0	0	0	16	31	47	0	0	0	0	0	0	0	0	0	0	0	12	13	25	0	0	0	0	1	0	1	73
5:00 PM	0	0	0	0	4	7	11	0	0	0	0	0	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	0	24
5:15 PM	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	6	5	11	0	0	0	0	0	2	2	21
5:30 PM	0	0	0	0	6	4	10	0	0	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0	0	0	0	16
5:45 PM	0	0	0	0	5	10	15	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	18
Total	0	0	0	0	18	26	44	0	0	0	0	0	0	0	0	0	0	0	17	16	33	0	0	0	0	0	2	2	79
Grand Total	0	0	0	0	34	57	91	0	0	0	0	0	0	0	0	0	0	0	29	29	58	0	0	0	0	1	2	3	152
Approach %	0	0	0	0	37.4	62.6		0	0	0	0	0	0	0	0	0	0	0	50	50		0	0	0	0	33.3	66.7		
Total %	0	0	0	0	22.4	37.5	59.9	0	0	0	0	0	0	0	0	0	0	0	19.1	19.1	38.2	0	0	0	0	0.66	1.32	1.97	
Exiting Leg Total	91							0							58							3							152

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Driveway							Massachusetts Ave							Menotomy Road							Massachusetts Ave							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:30 PM	0	0	0	0	5	9	14	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	0	19
4:45 PM	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	0	4	5	9	0	0	0	0	0	0	0	17
5:00 PM	0	0	0	0	4	7	11	0	0	0	0	0	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	0	0	24
5:15 PM	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	6	5	11	0	0	0	0	0	2	2	21	
Total Volume	0	0	0	0	15	26	41	0	0	0	0	0	0	0	0	0	0	0	15	23	38	0	0	0	0	0	2	2	81	
% Approach Total	0.0	0.0	0.0	0.0	36.6	63.4		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	39.5	60.5		0.0	0.0	0.0	0.0	0.0	100.0			
PHF	0.000	0.000	0.000	0.000	0.750	0.722	0.732	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.639	0.731	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.844	
Entering Leg	0	0	0	0	15	26	41	0	0	0	0	0	0	0	0	0	0	0	15	23	38	0	0	0	0	0	2	2	81	
Exiting Leg	41							0							38							2							81	
Total	82							0							76							4							162	

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	48	0	0	48	0	0	0	0	0	72	0	72	120
7:15 AM	56	0	0	56	0	1	0	1	0	109	0	109	166
7:30 AM	76	0	0	76	0	0	0	0	0	100	0	100	176
7:45 AM	87	0	0	87	2	0	0	2	0	103	0	103	192
Total	267	0	0	267	2	1	0	3	0	384	0	384	654
8:00 AM	107	0	0	107	0	0	0	0	0	136	0	136	243
8:15 AM	131	0	0	131	0	1	0	1	0	170	0	170	302
8:30 AM	104	0	0	104	0	0	0	0	1	102	0	103	207
8:45 AM	95	1	0	96	0	0	0	0	0	111	0	111	207
Total	437	1	0	438	0	1	0	1	1	519	0	520	959
Grand Total	704	1	0	705	2	2	0	4	1	903	0	904	1613
Approach %	99.9	0.1	0.0		50.0	50.0	0.0		0.1	99.9	0.0		
Total %	43.6	0.1	0.0	43.7	0.1	0.1	0.0	0.2	0.1	56.0	0.0	56.0	
Exiting Leg Total	905				2				706				1613
Cars	664	1	0	665	2	2	0	4	1	853	0	854	1523
% Cars	94.3	100.0	0.0	94.3	100.0	100.0	0.0	100.0	100.0	94.5	0.0	94.5	94.4
Exiting Leg Total	855				2				666				1523
Heavy Vehicles	40	0	0	40	0	0	0	0	0	50	0	50	90
% Heavy Vehicles	5.7	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.5	5.6
Exiting Leg Total	50				0				40				90

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
8:00 AM	107	0	0	107	0	0	0	0	0	136	0	136	243
8:15 AM	131	0	0	131	0	1	0	1	0	170	0	170	302
8:30 AM	104	0	0	104	0	0	0	0	1	102	0	103	207
8:45 AM	95	1	0	96	0	0	0	0	0	111	0	111	207
Total Volume	437	1	0	438	0	1	0	1	1	519	0	520	959
% Approach Total	99.8	0.2	0.0		0.0	100.0	0.0		0.2	99.8	0.0		
PHF	0.834	0.250	0.000	0.836	0.000	0.250	0.000	0.250	0.250	0.763	0.000	0.765	0.794
Cars	414	1	0	415	0	1	0	1	1	501	0	502	918
Cars %	94.7	100.0	0.0	94.7	0.0	100.0	0.0	100.0	100.0	96.5	0.0	96.5	95.7
Heavy Vehicles	23	0	0	23	0	0	0	0	0	18	0	18	41
Heavy Vehicles %	5.3	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	3.5	0.0	3.5	4.3
Cars Enter Leg	414	1	0	415	0	1	0	1	1	501	0	502	918
Heavy Enter Leg	23	0	0	23	0	0	0	0	0	18	0	18	41
Total Entering Leg	437	1	0	438	0	1	0	1	1	519	0	520	959
Cars Exiting Leg				501				2				415	918
Heavy Exiting Leg				18				0				23	41
Total Exiting Leg				519				2				438	959

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Cars**

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	44	0	0	44	0	0	0	0	0	64	0	64	108
7:15 AM	54	0	0	54	0	1	0	1	0	99	0	99	154
7:30 AM	73	0	0	73	0	0	0	0	0	93	0	93	166
7:45 AM	79	0	0	79	2	0	0	2	0	96	0	96	177
Total	250	0	0	250	2	1	0	3	0	352	0	352	605
8:00 AM	103	0	0	103	0	0	0	0	0	130	0	130	233
8:15 AM	124	0	0	124	0	1	0	1	0	166	0	166	291
8:30 AM	99	0	0	99	0	0	0	0	1	98	0	99	198
8:45 AM	88	1	0	89	0	0	0	0	0	107	0	107	196
Total	414	1	0	415	0	1	0	1	1	501	0	502	918
Grand Total	664	1	0	665	2	2	0	4	1	853	0	854	1523
Approach %	99.8	0.2	0.0		50.0	50.0	0.0		0.1	99.9	0.0		
Total %	43.6	0.1	0.0	43.7	0.1	0.1	0.0	0.3	0.1	56.0	0.0	56.1	
Exiting Leg Total	855				2				666				1523

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
8:00 AM	103	0	0	103	0	0	0	0	0	130	0	130	233
8:15 AM	124	0	0	124	0	1	0	1	0	166	0	166	291
8:30 AM	99	0	0	99	0	0	0	0	1	98	0	99	198
8:45 AM	88	1	0	89	0	0	0	0	0	107	0	107	196
Total Volume	414	1	0	415	0	1	0	1	1	501	0	502	918
% Approach Total	99.8	0.2	0.0		0.0	100.0	0.0		0.2	99.8	0.0		
PHF	0.835	0.250	0.000	0.837	0.000	0.250	0.000	0.250	0.250	0.755	0.000	0.756	0.789
Entering Leg	414	1	0	415	0	1	0	1	1	501	0	502	918
Exiting Leg				501				2				415	918
Total				916				3				917	1836

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	8	0	8	12
7:15 AM	2	0	0	2	0	0	0	0	0	10	0	10	12
7:30 AM	3	0	0	3	0	0	0	0	0	7	0	7	10
7:45 AM	8	0	0	8	0	0	0	0	0	7	0	7	15
Total	17	0	0	17	0	0	0	0	0	32	0	32	49
8:00 AM	4	0	0	4	0	0	0	0	0	6	0	6	10
8:15 AM	7	0	0	7	0	0	0	0	0	4	0	4	11
8:30 AM	5	0	0	5	0	0	0	0	0	4	0	4	9
8:45 AM	7	0	0	7	0	0	0	0	0	4	0	4	11
Total	23	0	0	23	0	0	0	0	0	18	0	18	41
Grand Total	40	0	0	40	0	0	0	0	0	50	0	50	90
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	44.4	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	55.6	0.0	55.6	
Exiting Leg Total	50				0				40				90
Buses	14	0	0	14	0	0	0	0	0	17	0	17	31
% Buses	35.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	34.0	34.4
Exiting Leg Total	17				0				14				31
Single-Unit Trucks	24	0	0	24	0	0	0	0	0	28	0	28	52
% Single-Unit	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	56.0	0.0	56.0	57.8
Exiting Leg Total	28				0				24				52
Articulated Trucks	2	0	0	2	0	0	0	0	0	5	0	5	7
% Articulated	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	10.0	7.8
Exiting Leg Total	5				0				2				7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total	
	from East				from South				from West					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	4	0	0	4	0	0	0	0	0	8	0	8	12	
7:15 AM	2	0	0	2	0	0	0	0	0	10	0	10	12	
7:30 AM	3	0	0	3	0	0	0	0	0	7	0	7	10	
7:45 AM	8	0	0	8	0	0	0	0	0	7	0	7	15	
Total Volume	17	0	0	17	0	0	0	0	0	32	0	32	49	
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0			0.0	100.0	0.0		
PHF	0.531	0.000	0.000	0.531	0.000	0.000	0.000	0.000		0.000	0.800	0.000	0.800	0.817
Buses	6	0	0	6	0	0	0	0	0	10	0	10	16	
Buses %	35.3	0.0	0.0	35.3	0.0	0.0	0.0	0.0	0.0	31.3	0.0	31.3	32.7	
Single-Unit Trucks	11	0	0	11	0	0	0	0	0	19	0	19	30	
Single-Unit %	64.7	0.0	0.0	64.7	0.0	0.0	0.0	0.0	0.0	59.4	0.0	59.4	61.2	
Articulated Trucks	0	0	0	0	0	0	0	0	0	3	0	3	3	
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	9.4	6.1	
Buses	6	0	0	6	0	0	0	0	0	10	0	10	16	
Single-Unit Trucks	11	0	0	11	0	0	0	0	0	19	0	19	30	
Articulated Trucks	0	0	0	0	0	0	0	0	0	3	0	3	3	
Total Entering Leg	17	0	0	17	0	0	0	0	0	32	0	32	49	
Buses				10				0				6	16	
Single-Unit Trucks				19				0				11	30	
Articulated Trucks				3				0				0	3	
Total Exiting Leg				32				0				17	49	

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class:

Buses

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	3
7:15 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
7:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
7:45 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
Total	6	0	0	6	0	0	0	0	0	10	0	10	16
8:00 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
8:15 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total	8	0	0	8	0	0	0	0	0	7	0	7	15
Grand Total	14	0	0	14	0	0	0	0	0	17	0	17	31
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	45.2	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	54.8	0.0	54.8	
Exiting Leg Total	17				0				14				31

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
7:45 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
8:00 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
8:15 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total Volume	10	0	0	10	0	0	0	0	0	9	0	9	19
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.833	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.950
Entering Leg	10	0	0	10	0	0	0	0	0	9	0	9	19
Exiting Leg				9				0				10	19
Total				19				0				19	38

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	5	0	5	9
7:15 AM	1	0	0	1	0	0	0	0	0	7	0	7	8
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	5	5
7:45 AM	6	0	0	6	0	0	0	0	0	2	0	2	8
Total	11	0	0	11	0	0	0	0	0	19	0	19	30
8:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:15 AM	4	0	0	4	0	0	0	0	0	2	0	2	6
8:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
8:45 AM	5	0	0	5	0	0	0	0	0	3	0	3	8
Total	13	0	0	13	0	0	0	0	0	9	0	9	22
Grand Total	24	0	0	24	0	0	0	0	0	28	0	28	52
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	46.2	0.0	0.0	46.2	0.0	0.0	0.0	0.0	0.0	53.8	0.0	53.8	
Exiting Leg Total	28				0				24				52

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	5	0	5	9
7:15 AM	1	0	0	1	0	0	0	0	0	7	0	7	8
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	5	5
7:45 AM	6	0	0	6	0	0	0	0	0	2	0	2	8
Total Volume	11	0	0	11	0	0	0	0	0	19	0	19	30
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.458	0.000	0.000	0.458	0.000	0.000	0.000	0.000	0.000	0.679	0.000	0.679	0.833
Entering Leg	11	0	0	11	0	0	0	0	0	19	0	19	30
Exiting Leg				19								11	30
Total				30				0				30	60

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	0	0	0	0	3	0	3	3
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	0	0	0	0	0	2	0	2	4
Grand Total	2	0	0	2	0	0	0	0	0	5	0	5	7
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	71.4	0.0	71.4	
Exiting Leg Total	5				0				2				7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	2	0	0	0	0	0	4	0	4	6
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	2	0	0	2	0	0	0	0	0	4	0	4	6
Exiting Leg				4				0				2	6
Total				6				0				6	12

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Massachusetts Ave						Orchard Place						Massachusetts Ave						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	2
7:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	2	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	4	6
8:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	5	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	4
Total	3	0	0	0	0	3	0	0	0	0	0	0	0	0	9	0	0	0	9	12
Grand Total	5	0	0	0	0	5	0	0	0	0	0	0	0	0	13	0	0	0	13	18
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
Total %	27.8	0.0	0.0	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.2	0.0	0.0	0.0		72.2	
Exiting Leg Total	13						0						5						18	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave						Orchard Place						Massachusetts Ave						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	5	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	4
Total Volume	3	0	0	0	0	3	0	0	0	0	0	0	0	0	9	0	0	0	9	12
% Approach Total	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
PHF	0.750	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	0.000	0.000	0.000	0.450	0.500
Entering Leg	3	0	0	0	0	3	0	0	0	0	0	0	0	0	9	0	0	0	9	12
Exiting Leg						9							0		3				3	12
Total						12						0							12	24

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Pedestrians

	Massachusetts Ave							Orchard Place							Massachusetts Ave							Total
	from East							from South							from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total			
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	3	
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	1	0	1	0	4	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	4	
Total	0	0	0	0	0	0	0	0	0	0	5	5	10	0	0	0	1	0	1	0	11	
8:00 AM	0	0	0	0	0	0	0	0	0	0	6	4	10	0	0	0	0	0	0	0	10	
8:15 AM	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	8	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	4	
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	4	
Total	0	0	0	0	0	0	0	0	0	0	14	12	26	0	0	0	0	0	0	0	26	
Grand Total	0	0	0	0	0	0	0	0	0	0	19	17	36	0	0	0	1	0	1	0	37	
Approach %	0	0	0	0	0	0	0	0	0	0	52.778	47.222		0	0	0	100	0				
Total %	0	0	0	0	0	0	0	0	0	0	51.351	45.946	97.297	0	0	0	2.7027	0	2.7027			
Exiting Leg Total	0							36							1							37

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Massachusetts Ave						Orchard Place						Massachusetts Ave						Total		
	from East						from South						from West								
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total			
7:30 AM	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	1	0	1	4		
7:45 AM	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	4		
8:00 AM	0	0	0	0	0	0	0	0	0	6	4	10	0	0	0	0	0	0	10		
8:15 AM	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	0	0	0	8		
Total Volume	0	0	0	0	0	0	0	0	0	15	10	25	0	0	0	1	0	1	26		
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	60.0	40.0		0.0	0.0	0.0	100.0	0.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.625	0.625	0.000	0.000	0.000	0.250	0.000	0.250	0.650		
Entering Leg	0	0	0	0	0	0	0	0	0	15	10	25	0	0	0	1	0	1	26		
Exiting Leg	0						0						25						1		26
Total	0						50						2						52		

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	108	0	0	108	0	0	0	0	0	114	1	115	223
4:15 PM	114	0	0	114	0	0	0	0	0	99	0	99	213
4:30 PM	117	0	0	117	1	0	0	1	0	121	0	121	239
4:45 PM	108	0	0	108	0	0	0	0	1	124	0	125	233
Total	447	0	0	447	1	0	0	1	1	458	1	460	908
5:00 PM	112	0	0	112	0	0	0	0	0	147	0	147	259
5:15 PM	98	0	0	98	0	0	0	0	0	131	0	131	229
5:30 PM	97	0	1	98	0	0	0	0	1	130	0	131	229
5:45 PM	100	0	0	100	0	0	0	0	1	139	0	140	240
Total	407	0	1	408	0	0	0	0	2	547	0	549	957
Grand Total	854	0	1	855	1	0	0	1	3	1005	1	1009	1865
Approach %	99.9	0.0	0.1		100.0	0.0	0.0		0.3	99.6	0.1		
Total %	45.8	0.0	0.1	45.8	0.1	0.0	0.0	0.1	0.2	53.9	0.1	54.1	
Exiting Leg Total	1007				3				855				1865
Cars	838	0	1	839	1	0	0	1	3	981	1	985	1825
% Cars	98.1	0.0	100.0	98.1	100.0	0.0	0.0	100.0	100.0	97.6	100.0	97.6	97.9
Exiting Leg Total	983				3				839				1825
Heavy Vehicles	16	0	0	16	0	0	0	0	0	24	0	24	40
% Heavy Vehicles	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	2.4	0.0	2.4	2.1
Exiting Leg Total	24				0				16				40

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	117	0	0	117	1	0	0	1	0	121	0	121	239
4:45 PM	108	0	0	108	0	0	0	0	1	124	0	125	233
5:00 PM	112	0	0	112	0	0	0	0	0	147	0	147	259
5:15 PM	98	0	0	98	0	0	0	0	0	131	0	131	229
Total Volume	435	0	0	435	1	0	0	1	1	523	0	524	960
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.2	99.8	0.0		
PHF	0.929	0.000	0.000	0.929	0.250	0.000	0.000	0.250	0.250	0.889	0.000	0.891	0.927
Cars	424	0	0	424	1	0	0	1	1	512	0	513	938
Cars %	97.5	0.0	0.0	97.5	100.0	0.0	0.0	100.0	100.0	97.9	0.0	97.9	97.7
Heavy Vehicles	11	0	0	11	0	0	0	0	0	11	0	11	22
Heavy Vehicles %	2.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.1	0.0	2.1	2.3
Cars Enter Leg	424	0	0	424	1	0	0	1	1	512	0	513	938
Heavy Enter Leg	11	0	0	11	0	0	0	0	0	11	0	11	22
Total Entering Leg	435	0	0	435	1	0	0	1	1	523	0	524	960
Cars Exiting Leg				513				1				424	938
Heavy Exiting Leg				11				0				11	22
Total Exiting Leg				524				1				435	960

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Cars

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	107	0	0	107	0	0	0	0	0	109	1	110	217
4:15 PM	112	0	0	112	0	0	0	0	0	94	0	94	206
4:30 PM	113	0	0	113	1	0	0	1	0	119	0	119	233
4:45 PM	104	0	0	104	0	0	0	0	1	120	0	121	225
Total	436	0	0	436	1	0	0	1	1	442	1	444	881
5:00 PM	111	0	0	111	0	0	0	0	0	145	0	145	256
5:15 PM	96	0	0	96	0	0	0	0	0	128	0	128	224
5:30 PM	96	0	1	97	0	0	0	0	1	128	0	129	226
5:45 PM	99	0	0	99	0	0	0	0	1	138	0	139	238
Total	402	0	1	403	0	0	0	0	2	539	0	541	944
Grand Total	838	0	1	839	1	0	0	1	3	981	1	985	1825
Approach %	99.9	0.0	0.1		100.0	0.0	0.0		0.3	99.6	0.1		
Total %	45.9	0.0	0.1	46.0	0.1	0.0	0.0	0.1	0.2	53.8	0.1	54.0	
Exiting Leg Total	983				3				839				1825

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	111	0	0	111	0	0	0	0	0	145	0	145	256
5:15 PM	96	0	0	96	0	0	0	0	0	128	0	128	224
5:30 PM	96	0	1	97	0	0	0	0	1	128	0	129	226
5:45 PM	99	0	0	99	0	0	0	0	1	138	0	139	238
Total Volume	402	0	1	403	0	0	0	0	2	539	0	541	944
% Approach Total	99.8	0.0	0.2		0.0	0.0	0.0		0.4	99.6	0.0		
PHF	0.905	0.000	0.250	0.908	0.000	0.000	0.000	0.000	0.500	0.929	0.000	0.933	0.922
Entering Leg	402	0	1	403	0	0	0	0	2	539	0	541	944
Exiting Leg				540				2				402	944
Total				943				2				943	1888

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	5	0	5	6
4:15 PM	2	0	0	2	0	0	0	0	0	5	0	5	7
4:30 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
4:45 PM	4	0	0	4	0	0	0	0	0	4	0	4	8
Total	11	0	0	11	0	0	0	0	0	16	0	16	27
5:00 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
5:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
5:30 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
5:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	5	0	0	5	0	0	0	0	0	8	0	8	13
Grand Total	16	0	0	16	0	0	0	0	0	24	0	24	40
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	60.0	
Exiting Leg Total	24				0				16				40
Buses	9	0	0	9	0	0	0	0	0	11	0	11	20
% Buses	56.3	0.0	0.0	56.3	0.0	0.0	0.0	0.0	0.0	45.8	0.0	45.8	50.0
Exiting Leg Total	11				0				9				20
Single-Unit Trucks	7	0	0	7	0	0	0	0	0	12	0	12	19
% Single-Unit	43.8	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	47.5
Exiting Leg Total	12				0				7				19
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	4.2	2.5
Exiting Leg Total	1				0				0				1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	5	0	5	6
4:15 PM	2	0	0	2	0	0	0	0	0	5	0	5	7
4:30 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
4:45 PM	4	0	0	4	0	0	0	0	0	4	0	4	8
Total Volume	11	0	0	11	0	0	0	0	0	16	0	16	27
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.688	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.000	0.800	0.000	0.800	0.844
Buses	6	0	0	6	0	0	0	0	0	7	0	7	13
Buses %	54.5	0.0	0.0	54.5	0.0	0.0	0.0	0.0	0.0	43.8	0.0	43.8	48.1
Single-Unit Trucks	5	0	0	5	0	0	0	0	0	8	0	8	13
Single-Unit %	45.5	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	48.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	6.3	3.7
Buses	6	0	0	6	0	0	0	0	0	7	0	7	13
Single-Unit Trucks	5	0	0	5	0	0	0	0	0	8	0	8	13
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Entering Leg	11	0	0	11	0	0	0	0	0	16	0	16	27
Buses				7				0				6	13
Single-Unit Trucks				8				0				5	13
Articulated Trucks				1				0				0	1
Total Exiting Leg				16				0				11	27

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Buses

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:45 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
Total	6	0	0	6	0	0	0	0	0	7	0	7	13
5:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	3	0	0	3	0	0	0	0	0	4	0	4	7
Grand Total	9	0	0	9	0	0	0	0	0	11	0	11	20
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	45.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	55.0	0.0	55.0	
Exiting Leg Total	11				0				9				20

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave					Orchard Place					Massachusetts Ave					Total
	from East					from South					from West					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	1	0	0	1		0	0	0	0		0	3	0	3		4
4:15 PM	0	0	0	0		0	0	0	0		0	2	0	2		2
4:30 PM	2	0	0	2		0	0	0	0		0	0	0	0		2
4:45 PM	3	0	0	3		0	0	0	0		0	2	0	2		5
Total Volume	6	0	0	6		0	0	0	0		0	7	0	7		13
% Approach Total	100.0	0.0	0.0			0.0	0.0	0.0			0.0	100.0	0.0			
PHF	0.500	0.000	0.000	0.500		0.000	0.000	0.000	0.000		0.000	0.583	0.000	0.583		0.650
Entering Leg	6	0	0	6		0	0	0	0		0	7	0	7		13
Exiting Leg				7					0					6		13
Total	13					0					13					26

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Single-Unit Trucks

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	5	0	0	5	0	0	0	0	0	8	0	8	13
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	0	0	0	0	0	4	0	4	6
Grand Total	7	0	0	7	0	0	0	0	0	12	0	12	19
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	36.8	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	63.2	0.0	63.2	
Exiting Leg Total	12				0				7				19

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	5	0	0	5	0	0	0	0	0	8	0	8	13
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.667	0.650
Entering Leg	5	0	0	5	0	0	0	0	0	8	0	8	13
Exiting Leg				8				0				5	13
Total				13				0				13	26

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Articulated Trucks

	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	
Exiting Leg Total	1				0				0				1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Orchard Place				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	1
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	1	1
Exiting Leg				1				0				0	1
Total				1				0				1	2

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Massachusetts Ave						Orchard Place						Massachusetts Ave						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	2
4:15 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	3	5
4:30 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	2	4
4:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	4	5
Total	6	0	0	0	0	6	0	0	0	0	0	0	0	10	0	0	0	0	10	16
5:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	6	7
5:15 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	2	4
5:30 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	0	0	8	10
5:45 PM	5	0	0	0	0	5	0	0	0	0	0	0	0	6	0	0	0	0	6	11
Total	10	0	0	0	0	10	0	0	0	0	0	0	0	22	0	0	0	0	22	32
Grand Total	16	0	0	0	0	16	0	0	0	0	0	0	0	32	0	0	0	0	32	48
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
Total %	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	66.7		
Exiting Leg Total	32						0						16						48	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Ave						Orchard Place							Massachusetts Ave							Total
	from East						from South							from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total			
5:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	6	7	
5:15 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	2	4	
5:30 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	0	0	8	10	
5:45 PM	5	0	0	0	0	5	0	0	0	0	0	0	0	6	0	0	0	0	6	11	
Total Volume	10	0	0	0	0	10	0	0	0	0	0	0	0	22	0	0	0	0	22	32	
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0				
PHF	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.688	0.727	
Entering Leg	10	0	0	0	0	10	0	0	0	0	0	0	0	22	0	0	0	0	22	32	
Exiting Leg	22						0							10							32
Total	32						0							32							64

PDI File #: **228473 C**
 Location: **S: Orchard Place**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Pedestrians**

	Massachusetts Ave						Orchard Place						Massachusetts Ave						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	1	1	2	6
4:45 PM	0	0	0	1	0	1	0	0	0	0	5	4	9	0	0	0	0	0	0	10
Total	0	0	0	1	0	1	0	0	0	0	14	10	24	0	0	0	1	1	2	27
5:00 PM	0	0	0	0	0	0	0	0	0	0	5	10	15	0	0	0	0	0	0	15
5:15 PM	0	0	0	0	0	0	0	0	0	0	7	3	10	0	0	0	0	0	0	10
5:30 PM	0	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	0	0	11
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	21	16	37	0	0	0	0	0	0	37
Grand Total	0	0	0	1	0	1	0	0	0	0	35	26	61	0	0	0	1	1	2	64
Approach %	0	0	0	100	0		0	0	0	0	57.377	42.623		0	0	0	50	50		
Total %	0	0	0	1.5625	0	1.5625	0	0	0	0	54.688	40.625	95.313	0	0	0	1.5625	1.5625	3.125	
Exiting Leg Total	1						61						2						64	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Massachusetts Ave						Orchard Place						Massachusetts Ave						
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:45 PM	0	0	0	1	0	1	0	0	0	5	4	9	0	0	0	0	0	0	10
5:00 PM	0	0	0	0	0	0	0	0	0	5	10	15	0	0	0	0	0	0	15
5:15 PM	0	0	0	0	0	0	0	0	0	7	3	10	0	0	0	0	0	0	10
5:30 PM	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	0	0	11
Total Volume	0	0	0	1	0	1	0	0	0	25	20	45	0	0	0	0	0	0	46
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	55.6	44.4		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.781	0.500	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.767
Entering Leg	0	0	0	1	0	1	0	0	0	25	20	45	0	0	0	0	0	0	46
Exiting Leg	1						45						0						46
Total	2						90						0						92

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	46	0	0	46	0	0	0	0	0	69	0	69	115
7:15 AM	55	2	0	57	6	1	0	7	1	108	0	109	173
7:30 AM	71	2	0	73	3	0	0	3	0	102	0	102	178
7:45 AM	87	2	0	89	3	3	0	6	1	104	0	105	200
Total	259	6	0	265	12	4	0	16	2	383	0	385	666
8:00 AM	106	0	0	106	3	1	0	4	1	140	0	141	251
8:15 AM	125	3	0	128	3	1	0	4	12	160	0	172	304
8:30 AM	100	4	0	104	3	3	0	6	4	100	0	104	214
8:45 AM	95	2	0	97	2	2	0	4	0	107	0	107	208
Total	426	9	0	435	11	7	0	18	17	507	0	524	977
Grand Total	685	15	0	700	23	11	0	34	19	890	0	909	1643
Approach %	97.9	2.1	0.0		67.6	32.4	0.0		2.1	97.9	0.0		
Total %	41.7	0.9	0.0	42.6	1.4	0.7	0.0	2.1	1.2	54.2	0.0	55.3	
Exiting Leg Total	913				34				696				1643
Cars	646	15	0	661	22	11	0	33	19	843	0	862	1556
% Cars	94.3	100.0	0.0	94.4	95.7	100.0	0.0	97.1	100.0	94.7	0.0	94.8	94.7
Exiting Leg Total	865				34				657				1556
Heavy Vehicles	39	0	0	39	1	0	0	1	0	47	0	47	87
% Heavy Vehicles	5.7	0.0	0.0	5.6	4.3	0.0	0.0	2.9	0.0	5.3	0.0	5.2	5.3
Exiting Leg Total	48				0				39				87

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
8:00 AM	106	0	0	106	3	1	0	4	1	140	0	141	251
8:15 AM	125	3	0	128	3	1	0	4	12	160	0	172	304
8:30 AM	100	4	0	104	3	3	0	6	4	100	0	104	214
8:45 AM	95	2	0	97	2	2	0	4	0	107	0	107	208
Total Volume	426	9	0	435	11	7	0	18	17	507	0	524	977
% Approach Total	97.9	2.1	0.0		61.1	38.9	0.0		3.2	96.8	0.0		
PHF	0.852	0.563	0.000	0.850	0.917	0.583	0.000	0.750	0.354	0.792	0.000	0.762	0.803
Cars	403	9	0	412	10	7	0	17	17	493	0	510	939
Cars %	94.6	100.0	0.0	94.7	90.9	100.0	0.0	94.4	100.0	97.2	0.0	97.3	96.1
Heavy Vehicles	23	0	0	23	1	0	0	1	0	14	0	14	38
Heavy Vehicles %	5.4	0.0	0.0	5.3	9.1	0.0	0.0	5.6	0.0	2.8	0.0	2.7	3.9
Cars Enter Leg	403	9	0	412	10	7	0	17	17	493	0	510	939
Heavy Enter Leg	23	0	0	23	1	0	0	1	0	14	0	14	38
Total Entering Leg	426	9	0	435	11	7	0	18	17	507	0	524	977
Cars Exiting Leg				503				26				410	939
Heavy Exiting Leg				15				0				23	38
Total Exiting Leg				518				26				433	977

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class:

Cars

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	42	0	0	42	0	0	0	0	0	61	0	61	103
7:15 AM	53	2	0	55	6	1	0	7	1	98	0	99	161
7:30 AM	68	2	0	70	3	0	0	3	0	95	0	95	168
7:45 AM	80	2	0	82	3	3	0	6	1	96	0	97	185
Total	243	6	0	249	12	4	0	16	2	350	0	352	617
8:00 AM	101	0	0	101	3	1	0	4	1	134	0	135	240
8:15 AM	120	3	0	123	3	1	0	4	12	157	0	169	296
8:30 AM	96	4	0	100	2	3	0	5	4	96	0	100	205
8:45 AM	86	2	0	88	2	2	0	4	0	106	0	106	198
Total	403	9	0	412	10	7	0	17	17	493	0	510	939
Grand Total	646	15	0	661	22	11	0	33	19	843	0	862	1556
Approach %	97.7	2.3	0.0		66.7	33.3	0.0		2.2	97.8	0.0		
Total %	41.5	1.0	0.0	42.5	1.4	0.7	0.0	2.1	1.2	54.2	0.0	55.4	
Exiting Leg Total	865				34				657				1556

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
8:00 AM	101	0	0	101	3	1	0	4	1	134	0	135	240
8:15 AM	120	3	0	123	3	1	0	4	12	157	0	169	296
8:30 AM	96	4	0	100	2	3	0	5	4	96	0	100	205
8:45 AM	86	2	0	88	2	2	0	4	0	106	0	106	198
Total Volume	403	9	0	412	10	7	0	17	17	493	0	510	939
% Approach Total	97.8	2.2	0.0		58.8	41.2	0.0		3.3	96.7	0.0		
PHF	0.840	0.563	0.000	0.837	0.833	0.583	0.000	0.850	0.354	0.785	0.000	0.754	0.793
Entering Leg	403	9	0	412	10	7	0	17	17	493	0	510	939
Exiting Leg				503				26				410	939
Total				915				43				920	1878

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	8	0	8	12
7:15 AM	2	0	0	2	0	0	0	0	0	10	0	10	12
7:30 AM	3	0	0	3	0	0	0	0	0	7	0	7	10
7:45 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
Total	16	0	0	16	0	0	0	0	0	33	0	33	49
8:00 AM	5	0	0	5	0	0	0	0	0	6	0	6	11
8:15 AM	5	0	0	5	0	0	0	0	0	3	0	3	8
8:30 AM	4	0	0	4	1	0	0	1	0	4	0	4	9
8:45 AM	9	0	0	9	0	0	0	0	0	1	0	1	10
Total	23	0	0	23	1	0	0	1	0	14	0	14	38
Grand Total	39	0	0	39	1	0	0	1	0	47	0	47	87
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	44.8	0.0	0.0	44.8	1.1	0.0	0.0	1.1	0.0	54.0	0.0	54.0	
Exiting Leg Total				48				0				39	87
Buses	14	0	0	14	0	0	0	0	0	17	0	17	31
% Buses	35.9	0.0	0.0	35.9	0.0	0.0	0.0	0.0	0.0	36.2	0.0	36.2	35.6
Exiting Leg Total				17				0				14	31
Single-Unit Trucks	23	0	0	23	1	0	0	1	0	25	0	25	49
% Single-Unit	59.0	0.0	0.0	59.0	100.0	0.0	0.0	100.0	0.0	53.2	0.0	53.2	56.3
Exiting Leg Total				26				0				23	49
Articulated Trucks	2	0	0	2	0	0	0	0	0	5	0	5	7
% Articulated	5.1	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	10.6	0.0	10.6	8.0
Exiting Leg Total				5				0				2	7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	8	0	8	12
7:15 AM	2	0	0	2	0	0	0	0	0	10	0	10	12
7:30 AM	3	0	0	3	0	0	0	0	0	7	0	7	10
7:45 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
Total Volume	16	0	0	16	0	0	0	0	0	33	0	33	49
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0			100.0	0.0		
PHF	0.571	0.000	0.000	0.571	0.000	0.000	0.000	0.000		0.825	0.000	0.825	0.817
Buses	6	0	0	6	0	0	0	0	0	10	0	10	16
Buses %	37.5	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	30.3	0.0	30.3	32.7
Single-Unit Trucks	10	0	0	10	0	0	0	0	0	20	0	20	30
Single-Unit %	62.5	0.0	0.0	62.5	0.0	0.0	0.0	0.0	0.0	60.6	0.0	60.6	61.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	3	0	3	3
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	9.1	6.1
Buses	6	0	0	6	0	0	0	0	0	10	0	10	16
Single-Unit Trucks	10	0	0	10	0	0	0	0	0	20	0	20	30
Articulated Trucks	0	0	0	0	0	0	0	0	0	3	0	3	3
Total Entering Leg	16	0	0	16	0	0	0	0	0	33	0	33	49
Buses				10				0				6	16
Single-Unit Trucks				20				0				10	30
Articulated Trucks				3				0				0	3
Total Exiting Leg				33				0				16	49

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	3
7:15 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
7:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
7:45 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
Total	6	0	0	6	0	0	0	0	0	10	0	10	16
8:00 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
8:15 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total	8	0	0	8	0	0	0	0	0	7	0	7	15
Grand Total	14	0	0	14	0	0	0	0	0	17	0	17	31
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	45.2	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	54.8	0.0	54.8	
Exiting Leg Total	17				0				14				31

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
7:45 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
8:00 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
8:15 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total Volume	10	0	0	10	0	0	0	0	0	9	0	9	19
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.833	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.950
Entering Leg	10	0	0	10	0	0	0	0	0	9	0	9	19
Exiting Leg				9				0				10	19
Total				19				0				19	38

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	5	0	5	9
7:15 AM	1	0	0	1	0	0	0	0	0	7	0	7	8
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	5	5
7:45 AM	5	0	0	5	0	0	0	0	0	3	0	3	8
Total	10	0	0	10	0	0	0	0	0	20	0	20	30
8:00 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
8:15 AM	2	0	0	2	0	0	0	0	0	1	0	1	3
8:30 AM	2	0	0	2	1	0	0	1	0	2	0	2	5
8:45 AM	7	0	0	7	0	0	0	0	0	0	0	0	7
Total	13	0	0	13	1	0	0	1	0	5	0	5	19
Grand Total	23	0	0	23	1	0	0	1	0	25	0	25	49
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	46.9	0.0	0.0	46.9	2.0	0.0	0.0	2.0	0.0	51.0	0.0	51.0	
Exiting Leg Total	26				0				23				49

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	4	0	0	4	0	0	0	0	0	5	0	5	9
7:15 AM	1	0	0	1	0	0	0	0	0	7	0	7	8
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	5	5
7:45 AM	5	0	0	5	0	0	0	0	0	3	0	3	8
Total Volume	10	0	0	10	0	0	0	0	0	20	0	20	30
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.714	0.000	0.714	0.833
Entering Leg	10	0	0	10	0	0	0	0	0	20	0	20	30
Exiting Leg				20				0				10	30
Total				30				0				30	60

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	0	0	0	0	3	0	3	3
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	0	0	0	0	0	2	0	2	4
Grand Total	2	0	0	2	0	0	0	0	0	5	0	5	7
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	71.4	0.0	71.4	
Exiting Leg Total	5				0				2				7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	2	0	0	0	0	0	4	0	4	6
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	2	0	0	2	0	0	0	0	0	4	0	4	6
Exiting Leg				4				0				2	6
Total				6				0				6	12

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Massachusetts Ave						Walnut Street						Massachusetts Ave						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	2	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	4	6
8:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	5	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	4
Total	3	0	0	0	0	3	0	0	0	0	0	0	0	9	0	0	0	9	12
Grand Total	5	0	0	0	0	5	0	0	0	0	0	0	0	13	0	0	0	13	18
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	27.8	0.0	0.0	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.2	0.0	0.0	0.0	72.2	
Exiting Leg Total	13						0						5						18

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave						Walnut Street						Massachusetts Ave						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	5	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	3	4
Total Volume	3	0	0	0	0	3	0	0	0	0	0	0	0	9	0	0	0	0	9	12
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
PHF	0.750	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	0.000	0.000	0.000	0.450		0.500
Entering Leg	3	0	0	0	0	3	0	0	0	0	0	0	0	9	0	0	0	0	9	12
Exiting Leg	9						0						3						12	
Total	12						0						12						24	

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Pedestrians**

	Massachusetts Ave							Walnut Street							Massachusetts Ave							Total
	from East							from South							from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	0		
8:00 AM	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	6	10	0	0	0	0	0	0	0		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0		
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	4	6	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	10	16	26	0	0	0	0	0	0	0		
Grand Total	0	0	0	0	0	0	0	0	0	0	15	20	35	0	0	0	0	0	0	0		
Approach %	0	0	0	0	0	0	0	0	0	0	42.857	57.143		0	0	0	0	0	0			
Total %	0	0	0	0	0	0	0	0	0	0	42.857	57.143	100	0	0	0	0	0	0			
Exiting Leg Total	0							35							0							35

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Massachusetts Ave						Walnut Street						Massachusetts Ave						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	7
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	6	10	0	0	0	0	0	0	10
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	4	6	0	0	0	0	0	0	6
Total Volume	0	0	0	0	0	0	0	0	0	0	10	16	26	0	0	0	0	0	0	26
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	61.5		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.667	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.650
Entering Leg	0	0	0	0	0	0	0	0	0	0	10	16	26	0	0	0	0	0	0	26
Exiting Leg	0						26						0						26	
Total	0						52						0						52	

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	102	1	0	103	3	2	0	5	3	109	0	112	220
4:15 PM	115	3	0	118	2	0	0	2	0	100	0	100	220
4:30 PM	114	0	0	114	3	2	0	5	1	122	0	123	242
4:45 PM	110	1	0	111	8	1	0	9	0	124	0	124	244
Total	441	5	0	446	16	5	0	21	4	455	0	459	926
5:00 PM	109	5	0	114	2	3	0	5	0	148	0	148	267
5:15 PM	98	2	0	100	4	1	0	5	3	132	0	135	240
5:30 PM	97	3	0	100	5	1	0	6	3	126	1	130	236
5:45 PM	98	4	0	102	3	3	0	6	3	137	0	140	248
Total	402	14	0	416	14	8	0	22	9	543	1	553	991
Grand Total	843	19	0	862	30	13	0	43	13	998	1	1012	1917
Approach %	97.8	2.2	0.0		69.8	30.2	0.0		1.3	98.6	0.1		
Total %	44.0	1.0	0.0	45.0	1.6	0.7	0.0	2.2	0.7	52.1	0.1	52.8	
Exiting Leg Total	1028				32				857				1917
Cars	827	19	0	846	30	13	0	43	13	973	1	987	1876
% Cars	98.1	100.0	0.0	98.1	100.0	100.0	0.0	100.0	100.0	97.5	100.0	97.5	97.9
Exiting Leg Total	1003				32				841				1876
Heavy Vehicles	16	0	0	16	0	0	0	0	0	25	0	25	41
% Heavy Vehicles	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	2.5	0.0	2.5	2.1
Exiting Leg Total	25				0				16				41

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	114	0	0	114	3	2	0	5	1	122	0	123	242
4:45 PM	110	1	0	111	8	1	0	9	0	124	0	124	244
5:00 PM	109	5	0	114	2	3	0	5	0	148	0	148	267
5:15 PM	98	2	0	100	4	1	0	5	3	132	0	135	240
Total Volume	431	8	0	439	17	7	0	24	4	526	0	530	993
% Approach Total	98.2	1.8	0.0		70.8	29.2	0.0		0.8	99.2	0.0		
PHF	0.945	0.400	0.000	0.963	0.531	0.583	0.000	0.667	0.333	0.889	0.000	0.895	0.930
Cars	421	8	0	429	17	7	0	24	4	515	0	519	972
Cars %	97.7	100.0	0.0	97.7	100.0	100.0	0.0	100.0	100.0	97.9	0.0	97.9	97.9
Heavy Vehicles	10	0	0	10	0	0	0	0	0	11	0	11	21
Heavy Vehicles %	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.1	0.0	2.1	2.1
Cars Enter Leg	421	8	0	429	17	7	0	24	4	515	0	519	972
Heavy Enter Leg	10	0	0	10	0	0	0	0	0	11	0	11	21
Total Entering Leg	431	8	0	439	17	7	0	24	4	526	0	530	993
Cars Exiting Leg				532				12				428	972
Heavy Exiting Leg				11				0				10	21
Total Exiting Leg				543				12				438	993

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars**

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	101	1	0	102	3	2	0	5	3	104	0	107	214
4:15 PM	113	3	0	116	2	0	0	2	0	95	0	95	213
4:30 PM	111	0	0	111	3	2	0	5	1	120	0	121	237
4:45 PM	106	1	0	107	8	1	0	9	0	120	0	120	236
Total	431	5	0	436	16	5	0	21	4	439	0	443	900
5:00 PM	108	5	0	113	2	3	0	5	0	146	0	146	264
5:15 PM	96	2	0	98	4	1	0	5	3	129	0	132	235
5:30 PM	96	3	0	99	5	1	0	6	3	124	1	128	233
5:45 PM	96	4	0	100	3	3	0	6	3	135	0	138	244
Total	396	14	0	410	14	8	0	22	9	534	1	544	976
Grand Total	827	19	0	846	30	13	0	43	13	973	1	987	1876
Approach %	97.8	2.2	0.0		69.8	30.2	0.0		1.3	98.6	0.1		
Total %	44.1	1.0	0.0	45.1	1.6	0.7	0.0	2.3	0.7	51.9	0.1	52.6	
Exiting Leg Total	1003				32				841				1876

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	108	5	0	113	2	3	0	5	0	146	0	146	264
5:15 PM	96	2	0	98	4	1	0	5	3	129	0	132	235
5:30 PM	96	3	0	99	5	1	0	6	3	124	1	128	233
5:45 PM	96	4	0	100	3	3	0	6	3	135	0	138	244
Total Volume	396	14	0	410	14	8	0	22	9	534	1	544	976
% Approach Total	96.6	3.4	0.0		63.6	36.4	0.0		1.7	98.2	0.2		
PHF	0.917	0.700	0.000	0.907	0.700	0.667	0.000	0.917	0.750	0.914	0.250	0.932	0.924
Entering Leg	396	14	0	410	14	8	0	22	9	534	1	544	976
Exiting Leg				548				23				405	976
Total				958				45				949	1952

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	5	0	5	6
4:15 PM	2	0	0	2	0	0	0	0	0	5	0	5	7
4:30 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
4:45 PM	4	0	0	4	0	0	0	0	0	4	0	4	8
Total	10	0	0	10	0	0	0	0	0	16	0	16	26
5:00 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
5:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
5:30 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
5:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total	6	0	0	6	0	0	0	0	0	9	0	9	15
Grand Total	16	0	0	16	0	0	0	0	0	25	0	25	41
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	39.0	0.0	0.0	39.0	0.0	0.0	0.0	0.0	0.0	61.0	0.0	61.0	
Exiting Leg Total	25				0				16				41
Buses	9	0	0	9	0	0	0	0	0	11	0	11	20
% Buses	56.3	0.0	0.0	56.3	0.0	0.0	0.0	0.0	0.0	44.0	0.0	44.0	48.8
Exiting Leg Total	11				0				9				20
Single-Unit Trucks	7	0	0	7	0	0	0	0	0	13	0	13	20
% Single-Unit	43.8	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	52.0	0.0	52.0	48.8
Exiting Leg Total	13				0				7				20
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0	2.4
Exiting Leg Total	1				0				0				1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	5	0	5	6
4:15 PM	2	0	0	2	0	0	0	0	0	5	0	5	7
4:30 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
4:45 PM	4	0	0	4	0	0	0	0	0	4	0	4	8
Total Volume	10	0	0	10	0	0	0	0	0	16	0	16	26
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.800	0.000	0.800	0.813
Buses	6	0	0	6	0	0	0	0	0	7	0	7	13
Buses %	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	43.8	0.0	43.8	50.0
Single-Unit Trucks	4	0	0	4	0	0	0	0	0	8	0	8	12
Single-Unit %	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	46.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	6.3	3.8
Buses	6	0	0	6	0	0	0	0	0	7	0	7	13
Single-Unit Trucks	4	0	0	4	0	0	0	0	0	8	0	8	12
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Entering Leg	10	0	0	10	0	0	0	0	0	16	0	16	26
Buses				7				0				6	13
Single-Unit Trucks				8				0				4	12
Articulated Trucks				1				0				0	1
Total Exiting Leg				16				0				10	26

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Buses

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:45 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
Total	6	0	0	6	0	0	0	0	0	7	0	7	13
5:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	3	0	0	3	0	0	0	0	0	4	0	4	7
Grand Total	9	0	0	9	0	0	0	0	0	11	0	11	20
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	45.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	55.0	0.0	55.0	
Exiting Leg Total	11				0				9				20

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:45 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
Total Volume	6	0	0	6	0	0	0	0	0	7	0	7	13
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.583	0.650
Entering Leg	6	0	0	6	0	0	0	0	0	7	0	7	13
Exiting Leg				7				0				6	13
Total				13				0				13	26

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Single-Unit Trucks

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	4	0	0	4	0	0	0	0	0	8	0	8	12
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	3	0	0	3	0	0	0	0	0	5	0	5	8
Grand Total	7	0	0	7	0	0	0	0	0	13	0	13	20
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	35.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	65.0	0.0	65.0	
Exiting Leg Total	13				0				7				20

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	4	0	0	4	0	0	0	0	0	8	0	8	12
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.667	0.600
Entering Leg	4	0	0	4	0	0	0	0	0	8	0	8	12
Exiting Leg				8				0				4	12
Total				12				0				12	24

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Articulated Trucks

	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	
Exiting Leg Total	1				0				0				1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Massachusetts Ave				Walnut Street				Massachusetts Ave				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	1
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	1	1
Exiting Leg				1				0				0	1
Total				1				0				1	2

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Massachusetts Ave							Walnut Street							Massachusetts Ave							Total
	from East							from South							from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total				
4:00 PM	1	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	1	3			
4:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	4			
4:30 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	5			
4:45 PM	1	0	0	0	0	1	1	0	0	0	0	1	0	4	0	0	0	4	6			
Total	5	0	0	0	0	5	2	0	0	0	0	2	0	11	0	0	0	11	18			
5:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	1	5	0	0	0	6	7			
5:15 PM	2	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	5			
5:30 PM	2	0	0	0	0	2	1	0	0	0	0	1	0	8	0	0	0	8	11			
5:45 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	6	0	0	0	6	10			
Total	9	1	0	0	0	10	1	0	0	0	0	1	1	21	0	0	0	22	33			
Grand Total	14	1	0	0	0	15	3	0	0	0	0	3	1	32	0	0	0	33	51			
Approach %	93.3	6.7	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		3.0	97.0	0.0	0.0	0.0					
Total %	27.5	2.0	0.0	0.0	0.0	29.4	5.9	0.0	0.0	0.0	0.0	5.9	2.0	62.7	0.0	0.0	0.0	64.7				
Exiting Leg Total	35						2						14						51			

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Ave						Walnut Street						Massachusetts Ave						Total			
	from East						from South						from West									
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total				
5:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	1	5	0	0	0	0	6	7		
5:15 PM	2	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	5		
5:30 PM	2	0	0	0	0	2	1	0	0	0	0	1	0	8	0	0	0	0	8	11		
5:45 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	6	10		
Total Volume	9	1	0	0	0	10	1	0	0	0	0	1	1	21	0	0	0	0	22	33		
% Approach Total	90.0	10.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		4.5	95.5	0.0	0.0	0.0					
PHF	0.563	0.250	0.000	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.656	0.000	0.000	0.000	0.688		0.750		
Entering Leg	9	1	0	0	0	10	1	0	0	0	0	1	1	21	0	0	0	0	22	33		
Exiting Leg							22							2	1	21	0	0	0	0	9	33
Total							32							3							31	66

PDI File #: **228473 D**
 Location: **S: Walnut Street**
 Location: **E: Massachusetts Ave W: Massachusetts Ave**
 City, State: **Arlington, MA**
 Client: **VAI/S. Kelly**
 Site Code: **915**
 Count Date: **Wednesday, March 16, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Pedestrians**

	Massachusetts Ave							Walnut Street							Massachusetts Ave							Total
	from East							from South							from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total				
4:00 PM	0	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0	1	3	4	11		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1		
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	5		
Total	0	0	0	0	0	0	0	0	0	0	9	6	15	0	0	0	1	3	4	19		
5:00 PM	0	0	0	0	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	13		
5:15 PM	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	8		
5:30 PM	0	0	0	0	0	0	0	0	0	0	7	3	10	0	0	0	0	1	1	11		
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2		
Total	0	0	0	0	0	0	0	0	0	0	17	16	33	0	0	0	0	1	1	34		
Grand Total	0	0	0	0	0	0	0	0	0	0	26	22	48	0	0	0	1	4	5	53		
Approach %	0	0	0	0	0	0	0	0	0	0	54.167	45.833		0	0	0	20	80				
Total %	0	0	0	0	0	0	0	0	0	0	49.057	41.509	90.566	0	0	0	1.8868	7.5472	9.434			
Exiting Leg Total	0							48							5							53

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Massachusetts Ave						Walnut Street						Massachusetts Ave						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
4:45 PM	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	13
5:15 PM	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	8
5:30 PM	0	0	0	0	0	0	0	0	0	7	3	10	0	0	0	0	1	1	11
Total Volume	0	0	0	0	0	0	0	0	0	19	17	36	0	0	0	0	1	1	37
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	52.8	47.2		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.679	0.472	0.692	0.000	0.000	0.000	0.000	0.250	0.250	0.712
Entering Leg	0	0	0	0	0	0	0	0	0	19	17	36	0	0	0	0	1	1	37
Exiting Leg	0						36						1						37
Total	0						72						2						74

MOTOR VEHICLE CRASH DATA



Crash #		City Town Name	Crash Date	Crash Severity	Crash Time	Number of Vehicles	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Weather Conditions	Roadway	Near Intersection Roadway
Massachusetts Avenue at Brattle Street													
1	4264763	ARLINGTON	Tuesday, October 11, 2016	Not Reported	3:20 PM	1	Daylight	Single vehicle crash	Dry	Not at junction	Clear/Clear	MASSACHUSETTS AVENUE	
2	4274893	ARLINGTON	Wednesday, November 2, 2016	No Injury	10:55 AM	2	Daylight	Rear-end	Dry	T-intersection	Clear	BRATTLE ST / MASSACHUSETTS AVENUE	
3	4316025	ARLINGTON	Thursday, January 19, 2017	No Injury	7:45 AM	2	Daylight	Rear-end	Dry	T-intersection	Clear	BRATTLE ST / MASSACHUSETTS AVENUE	
4	4366849	ARLINGTON	Saturday, May 20, 2017	No Injury	12:22 PM	2	Daylight	Rear-end	Dry	Not at junction	Clear	MASSACHUSETTS AVENUE	
5	4575758	ARLINGTON	Wednesday, July 18, 2018	Unknown	7:23 AM	2	Daylight	Angle	Dry	T-intersection	Clear	BRATTLE ST / MASSACHUSETTS AVENUE	
6	4601334	ARLINGTON	Wednesday, September 26, 2018	Unknown	12:22 PM	1	Daylight	Sideswipe, opposite direction	Dry	Not at junction	Clear	MASSACHUSETTS AVENUE	
7	4683895	ARLINGTON	Sunday, March 31, 2019	Non-fatal injury	12:04 PM	2	Daylight	Rear-end	Dry	T-intersection	Cloudy	BRATTLE ST / MASSACHUSETTS AVENUE	
8	4711466	ARLINGTON	Wednesday, June 12, 2019	No Injury	12:55 PM	2	Daylight	Angle	Dry	Not at junction	Clear	MASSACHUSETTS AVENUE	
9	4718026	ARLINGTON	Wednesday, June 26, 2019	No Injury	10:20 AM	2	Daylight	Rear-end	Dry	Not at junction	Cloudy	MASSACHUSETTS AVENUE	
10	4785389	ARLINGTON	Wednesday, December 4, 2019	No Injury	2:43 PM	1	Daylight	Single vehicle crash	Wet	T-intersection	Clear	BRATTLE STREET / MASSACHUSETTS AVENUE	
Crash Rate		0.37											
Massachusetts Avenue at Orchard Place													
1	4325680	ARLINGTON	Thursday, February 9, 2017	No Injury	2:52 PM	2	Daylight	Sideswipe, same direction	Snow	Not at junction	Snow/Blowing sand, snow	MASSACHUSETTS AVENUE / ORCHARD PLACE	
2	4386546	ARLINGTON	Monday, July 3, 2017	No Injury	2:56 PM	2	Daylight	Unknown	Dry	Four-way intersection	Clear	MASSACHUSETTS AVENUE	
3	4570337	ARLINGTON	Wednesday, July 18, 2018	Unknown	2:05 AM	3	Dark - lighted	Rear-end	Wet	Not at junction	Rain	MASSACHUSETTS AVENUE	
Crash Rate		0.13											
Massachusetts Avenue at Walnut Street													
1	4411786	ARLINGTON	Wednesday, August 16, 2017	Not Reported	6:41 AM	2	Dawn	Sideswipe, same direction	Dry	T-intersection	Clear/Clear	MASSACHUSETTS AVENUE / WALNUT ST	
2	4437404	ARLINGTON	Wednesday, October 4, 2017	No Injury	4:20 PM	2	Daylight	Angle	Dry	Not at junction	Clear	MASSACHUSETTS AVENUE	
3	4470197	ARLINGTON	Friday, December 15, 2017	No Injury	4:28 PM	2	Dark - lighted	Angle	Dry	T-intersection	Cloudy	MASSACHUSETTS AVENUE / WALNUT ST	
4	4489310	ARLINGTON	Thursday, January 18, 2018	No Injury	4:35 PM	3	Daylight	Sideswipe, same direction	Wet	Not at junction	Clear	MASSACHUSETTS AVENUE	WALNUT STREET
5	4515766	ARLINGTON	Thursday, March 15, 2018	Unknown	6:25 AM	1	Daylight	Single vehicle crash	Wet	Not at junction	Clear	WALNUT STREET	
6	4759871	ARLINGTON	Wednesday, October 9, 2019	Unknown	6:39 PM	2	Daylight	Angle	Unknown	Not at junction	Cloudy	MASSACHUSETTS AVENUE	
7	4819666	ARLINGTON	Wednesday, February 19, 2020	No Injury	10:56 AM	2	Daylight	Angle	Dry	T-intersection	Clear	MASSACHUSETTS AVENUE / WALNUT ST	
8	4860949	ARLINGTON	Thursday, July 16, 2020	Non-fatal injury	6:12 PM	2	Daylight	Angle	Dry	T-intersection	Clear	MASSACHUSETTS AVENUE / WALNUT ST	
Crash Rate		0.35											

TRIP GENERATION DATA



Institute of Transportation Engineers (ITE)

Trip Generation, 11th Edition

Land Use Code (LUC) 220 - Multifamily Housing (Low-Rise) Not Close to Rail Transit

Average Vehicle Trips Ends vs: Dwelling Units
Independent Variable (X): 50

AVERAGE WEEKDAY DAILY

$$T = 6.74$$

$$T = 6.74 * 50$$

$$T = 337.00$$

$$T = 338 \text{ vehicle trips}$$

with 50% (169 vpd) entering and 50% (169 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 0.40 * (X)$$

$$T = 0.40 * 50$$

$$T = 20.00$$

$$T = 20.00$$

$$T = 20 \text{ vehicle trips}$$

with 24% (5 vph) entering and 76% (15 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 0.51 * (X)$$

$$T = 0.51 * 50$$

$$T = 25.50$$

$$T = 25.50$$

$$T = 26 \text{ vehicle trips}$$

with 63% (16 vph) entering and 37% (10 vph) exiting.

SATURDAY DAILY

$$T = 4.55 * (X)$$

$$T = 4.55 * 50$$

$$T = 54.55$$

$$T = 54 \text{ vehicle trips}$$

with 50% (27 vpd) entering and 50% (27 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$$T = 0.41 * (X)$$

$$T = 0.41 * 50$$

$$T = 20.50$$

$$T = 20 \text{ vehicle trips}$$

with 50% (10 vph) entering and 50% (10 vph) exiting.

Directional Distribution unavailable assumed 50/50 split.

Institute of Transportation Engineers (ITE)
Trip Generation, 11th Edition
Land Use Code (LUC) 822 - Strip Retail Plaza (<40K)

Average Vehicle Trips Ends vs: 1,000 Square Feet Gross Leasable Area
 Independent Variable (X): 0.935

AVERAGE WEEKDAY DAILY

$T = 54.45 * X$
 $T = 54.45 * 0.935$
 $T = 50.91$
 $T = 50$ vehicle trips
 with 50% (25 vpd) entering and 50% (25 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 2.36 * (X)$
 $T = 2.36 * 0.935$
 $T = 2.21$
 $T = 2$ vehicle trips
 with 60% (1 vph) entering and 40% (1 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 6.59 * X$
 $T = 6.59 * 0.935$
 $T = 6.16$
 $T = 6$ vehicle trips
 with 50% (3 vph) entering and 50% (3 vph) exiting.

SATURDAY DAILY

LUC 822 Daily	54.45	LUC 822 Daily	X	X=	54.28
LUC 822 PM	6.59	LUC 822 PM	6.57		

$T = 54.28 * X$
 $T = 54.28 * 0.935$
 $T = 50.75$
 $T = 50$ vehicle trips
 with 50% (25 vph) entering and 50% (25 vph) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$T = 6.57 * X$
 $T = 6.57 * 0.935$
 $T = 6.14$
 $T = 6$ vehicle trips
 with 51% (3 vph) entering and 49% (3 vph) exiting.

Trip Generation Summary - Proposed Residential Development - Arlington, MA

Land Use Size	Residential 50	Commercial 935	Non-Auto --	Total --
Time Period				
<i>Weekday Morning Peak Hour</i>				
Entering	5	1	-1	5
Exiting	15	1	-3	13
Total	20	2	-4	18
<i>Weekday Evening Peak Hour</i>				
Entering	16	3	-3	16
Exiting	10	3	-2	11
Total	26	6	-5	27
<i>Weekday Daily</i>	338	50	-68	320

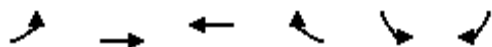
CAPACITY ANALYSIS WORKSHEETS



Lanes, Volumes, Timings

3: Massachusetts Avenue & Brattle Stret

2022 AM EX
06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	78	453	388	52	89	127	
Future Volume (vph)	78	453	388	52	89	127	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	125			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.984		0.921		
Flt Protected	0.950				0.980		
Satd. Flow (prot)	1787	1827	1768	0	1695	0	
Flt Permitted	0.282				0.980		
Satd. Flow (perm)	530	1827	1768	0	1695	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			10		76		
Link Speed (mph)		30	30		30		
Link Distance (ft)		362	330		475		
Travel Time (s)		8.2	7.5		10.8		
Peak Hour Factor	0.78	0.78	0.83	0.83	0.66	0.66	
Heavy Vehicles (%)	1%	4%	6%	4%	0%	2%	
Adj. Flow (vph)	100	581	467	63	135	192	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	100	581	530	0	327	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Minimum Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (%)	50.6%	50.6%	50.6%		28.1%		21%
Maximum Green (s)	40.0	40.0	40.0		20.0		17.0
Yellow Time (s)	3.0	3.0	3.0		3.0		2.0
All-Red Time (s)	2.0	2.0	2.0		2.0		0.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							0
Act Effect Green (s)	42.0	42.0	42.0		22.0		
Actuated g/C Ratio	0.47	0.47	0.47		0.25		

Baseline

Synchro 10 Report
Page 1

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2022 AM EX
06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
v/c Ratio	0.40	0.67	0.63		0.69		
Control Delay	21.4	23.1	21.5		31.6		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	21.4	23.1	21.5		31.6		
LOS	C	C	C		C		
Approach Delay		22.8	21.5		31.6		
Approach LOS		C	C		C		

Intersection Summary

Area Type: Other

Cycle Length: 89

Actuated Cycle Length: 89

Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 24.2

Intersection LOS: C

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15




Splits and Phases: 3: Massachusetts Avenue & Brattle Stret






HCM 2010 TWSC
5: Menotomy Road & Massachusetts Avenue

2022 AM EX
06/16/2022

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	514	26	8	429	1	9	0	10	1	1	2
Future Vol, veh/h	2	514	26	8	429	1	9	0	10	1	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	82	82	82	95	95	95	50	50	50
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	3	659	33	10	523	1	9	0	11	2	2	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	692	0	0	1229	1226	676	1231	1242	524
Stage 1	-	-	-	-	-	-	682	682	-	544	544	-
Stage 2	-	-	-	-	-	-	547	544	-	687	698	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1053	-	-	912	-	-	156	180	457	156	176	557
Stage 1	-	-	-	-	-	-	443	453	-	527	522	-
Stage 2	-	-	-	-	-	-	525	522	-	440	445	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1053	-	-	912	-	-	151	176	457	150	172	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	151	176	-	150	172	-
Stage 1	-	-	-	-	-	-	441	451	-	524	514	-
Stage 2	-	-	-	-	-	-	511	514	-	428	443	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			21.9			19.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	233	1053	-	-	912	-	-	249				
HCM Lane V/C Ratio	0.086	0.002	-	-	0.011	-	-	0.032				
HCM Control Delay (s)	21.9	8.4	0	-	9	0	-	19.9				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	524	1	1	437	1	0
Future Vol, veh/h	524	1	1	437	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	84	84	25	25
Heavy Vehicles, %	4	0	0	5	0	0
Mvmt Flow	681	1	1	520	4	0
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	682	0	1204	682
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	522	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	920	-	205	453
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	920	-	205	453
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	598	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		22.9	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	205	-	-	920	-	
HCM Lane V/C Ratio	0.02	-	-	0.001	-	
HCM Control Delay (s)	22.9	-	-	8.9	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	507	17	9	431	7	17
Future Vol, veh/h	507	17	9	431	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	85	85	75	75
Heavy Vehicles, %	3	0	0	5	0	9
Mvmt Flow	667	22	11	507	9	23

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	689	0	1207	678
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	529	-
Critical Hdwy	-	-	4.1	-	6.4	6.29
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.381
Pot Cap-1 Maneuver	-	-	915	-	204	440
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	915	-	201	440
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	17.2
HCM LOS			C

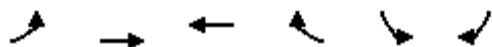
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	327	-	-	915	-
HCM Lane V/C Ratio	0.098	-	-	0.012	-
HCM Control Delay (s)	17.2	-	-	9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings

3: Massachusetts Avenue & Brattle Stret

2029 AM NO-BUILD

06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	81	485	402	54	92	132	
Future Volume (vph)	81	485	402	54	92	132	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	125			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.984		0.920		
Flt Protected	0.950				0.980		
Satd. Flow (prot)	1787	1827	1768	0	1693	0	
Flt Permitted	0.266				0.980		
Satd. Flow (perm)	500	1827	1768	0	1693	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			10		77		
Link Speed (mph)		30	30		30		
Link Distance (ft)		362	330		475		
Travel Time (s)		8.2	7.5		10.8		
Peak Hour Factor	0.78	0.78	0.83	0.83	0.66	0.66	
Heavy Vehicles (%)	1%	4%	6%	4%	0%	2%	
Adj. Flow (vph)	104	622	484	65	139	200	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	104	622	549	0	339	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Minimum Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (%)	50.6%	50.6%	50.6%		28.1%		21%
Maximum Green (s)	40.0	40.0	40.0		20.0		17.0
Yellow Time (s)	3.0	3.0	3.0		3.0		2.0
All-Red Time (s)	2.0	2.0	2.0		2.0		0.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							0
Act Effect Green (s)	42.0	42.0	42.0		22.0		
Actuated g/C Ratio	0.47	0.47	0.47		0.25		

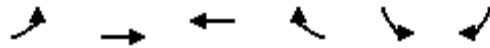
Baseline

Synchro 10 Report
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Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2029 AM NO-BUILD

06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
v/c Ratio	0.44	0.72	0.65		0.71		
Control Delay	23.2	24.7	22.2		33.0		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	23.2	24.7	22.2		33.0		
LOS	C	C	C		C		
Approach Delay		24.5	22.2		33.0		
Approach LOS		C	C		C		

Intersection Summary

Area Type: Other

Cycle Length: 89

Actuated Cycle Length: 89

Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 25.5

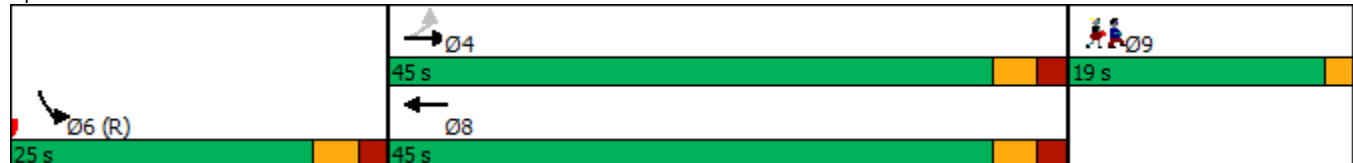
Intersection LOS: C

Intersection Capacity Utilization 76.7%




ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Massachusetts Avenue & Brattle Stret






Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	548	27	8	444	1	9	0	10	1	1	2
Future Vol, veh/h	2	548	27	8	444	1	9	0	10	1	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	82	82	82	95	95	95	50	50	50
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	3	703	35	10	541	1	9	0	11	2	2	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	542	0	0	738	0	0	1292	1289	721	1294	1306	542
Stage 1	-	-	-	-	-	-	727	727	-	562	562	-
Stage 2	-	-	-	-	-	-	565	562	-	732	744	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1037	-	-	877	-	-	141	165	431	141	161	544
Stage 1	-	-	-	-	-	-	419	432	-	515	513	-
Stage 2	-	-	-	-	-	-	513	513	-	416	424	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1037	-	-	877	-	-	136	162	431	135	158	544
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	162	-	135	158	-
Stage 1	-	-	-	-	-	-	417	430	-	512	505	-
Stage 2	-	-	-	-	-	-	499	505	-	404	422	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			23.6			21.2		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	213	1037	-	-	877	-	-	230				
HCM Lane V/C Ratio	0.094	0.002	-	-	0.011	-	-	0.035				
HCM Control Delay (s)	23.6	8.5	0	-	9.2	0	-	21.2				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	559	1	1	453	1	0
Future Vol, veh/h	559	1	1	453	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	84	84	25	25
Heavy Vehicles, %	4	0	0	5	0	0
Mvmt Flow	726	1	1	539	4	0

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	727	0	1268	727
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	541	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	886	-	188	427
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	886	-	188	427
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	-	-	886	-
HCM Lane V/C Ratio	0.021	-	-	0.001	-
HCM Control Delay (s)	24.6	-	-	9.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	541	18	9	446	7	17
Future Vol, veh/h	541	18	9	446	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	85	85	75	75
Heavy Vehicles, %	3	0	0	5	0	9
Mvmt Flow	712	24	11	525	9	23

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	736	0	1271	724
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	547	-
Critical Hdwy	-	-	4.1	-	6.4	6.29
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.381
Pot Cap-1 Maneuver	-	-	879	-	187	414
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	584	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	879	-	184	414
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	573	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	18.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	303	-	-	879	-
HCM Lane V/C Ratio	0.106	-	-	0.012	-
HCM Control Delay (s)	18.3	-	-	9.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2029 AM BUILD

06/16/2022



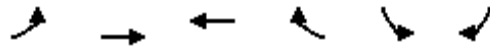
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	81	487	407	54	92	132	
Future Volume (vph)	81	487	407	54	92	132	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	125			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.984		0.920		
Flt Protected	0.950				0.980		
Satd. Flow (prot)	1787	1827	1768	0	1693	0	
Flt Permitted	0.261				0.980		
Satd. Flow (perm)	491	1827	1768	0	1693	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			10		77		
Link Speed (mph)		30	30		30		
Link Distance (ft)		362	330		475		
Travel Time (s)		8.2	7.5		10.8		
Peak Hour Factor	0.78	0.78	0.83	0.83	0.66	0.66	
Heavy Vehicles (%)	1%	4%	6%	4%	0%	2%	
Adj. Flow (vph)	104	624	490	65	139	200	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	104	624	555	0	339	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Minimum Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (%)	50.6%	50.6%	50.6%		28.1%		21%
Maximum Green (s)	40.0	40.0	40.0		20.0		17.0
Yellow Time (s)	3.0	3.0	3.0		3.0		2.0
All-Red Time (s)	2.0	2.0	2.0		2.0		0.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							0
Act Effect Green (s)	42.0	42.0	42.0		22.0		
Actuated g/C Ratio	0.47	0.47	0.47		0.25		

Baseline

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2029 AM BUILD

06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
v/c Ratio	0.45	0.72	0.66		0.71		
Control Delay	23.6	24.8	22.4		33.0		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	23.6	24.8	22.4		33.0		
LOS	C	C	C		C		
Approach Delay		24.7	22.4		33.0		
Approach LOS		C	C		C		

Intersection Summary

Area Type: Other

Cycle Length: 89

Actuated Cycle Length: 89

Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 25.6

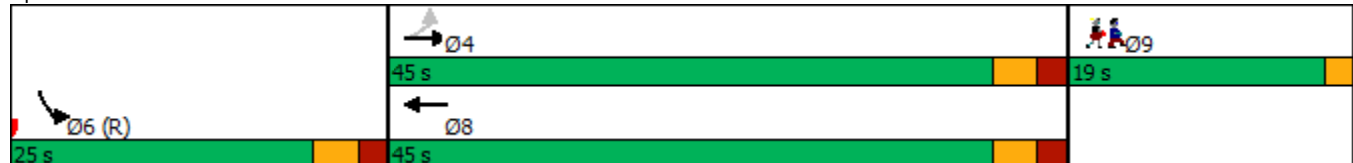
Intersection LOS: C

Intersection Capacity Utilization 76.7%




ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Massachusetts Avenue & Brattle Stret






Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	550	27	8	449	1	9	0	10	1	1	2
Future Vol, veh/h	2	550	27	8	449	1	9	0	10	1	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	82	82	82	95	95	95	50	50	50
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	3	705	35	10	548	1	9	0	11	2	2	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	549	0	0	740	0	0	1301	1298	723	1303	1315	549
Stage 1	-	-	-	-	-	-	729	729	-	569	569	-
Stage 2	-	-	-	-	-	-	572	569	-	734	746	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1031	-	-	876	-	-	139	163	430	139	159	539
Stage 1	-	-	-	-	-	-	417	431	-	511	509	-
Stage 2	-	-	-	-	-	-	509	509	-	415	424	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1031	-	-	876	-	-	134	160	430	133	156	539
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	160	-	133	156	-
Stage 1	-	-	-	-	-	-	415	429	-	508	501	-
Stage 2	-	-	-	-	-	-	495	501	-	403	422	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			23.9			21.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	210	1031	-	-	876	-	-	227				
HCM Lane V/C Ratio	0.095	0.002	-	-	0.011	-	-	0.035				
HCM Control Delay (s)	23.9	8.5	0	-	9.2	0	-	21.4				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	567	1	1	456	1	0
Future Vol, veh/h	567	1	1	456	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	84	84	25	25
Heavy Vehicles, %	4	0	0	5	0	0
Mvmt Flow	736	1	1	543	4	0

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	737	0	1282	737
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	545	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	878	-	184	422
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	878	-	184	422
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	584	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	25
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	184	-	-	878	-
HCM Lane V/C Ratio	0.022	-	-	0.001	-
HCM Control Delay (s)	25	-	-	9.1	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	549	18	9	449	7	11
Future Vol, veh/h	549	18	9	449	7	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	85	85	75	75
Heavy Vehicles, %	3	0	0	5	0	9
Mvmt Flow	722	24	11	528	9	15




Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	746	0	1284	734
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	-	-	4.1	-	6.4	6.29
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.381
Pot Cap-1 Maneuver	-	-	871	-	184	409
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	582	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	871	-	181	409
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	572	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	275	-	-	871	-
HCM Lane V/C Ratio	0.087	-	-	0.012	-
HCM Control Delay (s)	19.3	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	560	454	3	8	5
Future Vol, veh/h	2	560	454	3	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	609	493	3	9	5

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	496	0	0 1108 495
Stage 1	-	-	- 495 -
Stage 2	-	-	- 613 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1068	-	- 232 575
Stage 1	-	-	- 613 -
Stage 2	-	-	- 541 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1068	-	- 231 575
Mov Cap-2 Maneuver	-	-	- 231 -
Stage 1	-	-	- 611 -
Stage 2	-	-	- 541 -

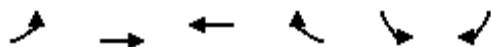
Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1068	-	-	-	300
HCM Lane V/C Ratio	0.002	-	-	-	0.047
HCM Control Delay (s)	8.4	0	-	-	17.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2022 PM EXISTING

06/16/2022



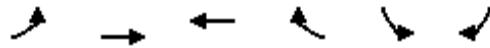
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	103	476	402	37	55	75	
Future Volume (vph)	103	476	402	37	55	75	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	125			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.989		0.922		
Flt Protected	0.950				0.979		
Satd. Flow (prot)	1805	1863	1824	0	1701	0	
Flt Permitted	0.322				0.979		
Satd. Flow (perm)	612	1863	1824	0	1701	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			7		73		
Link Speed (mph)		30	30		30		
Link Distance (ft)		362	330		475		
Travel Time (s)		8.2	7.5		10.8		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.79	0.79	
Heavy Vehicles (%)	0%	2%	3%	3%	2%	0%	
Adj. Flow (vph)	113	523	442	41	70	95	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	113	523	483	0	165	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Minimum Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (%)	50.6%	50.6%	50.6%		28.1%		21%
Maximum Green (s)	40.0	40.0	40.0		20.0		17.0
Yellow Time (s)	3.0	3.0	3.0		3.0		2.0
All-Red Time (s)	2.0	2.0	2.0		2.0		0.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							0
Act Effect Green (s)	42.0	42.0	42.0		22.0		
Actuated g/C Ratio	0.47	0.47	0.47		0.25		

Baseline

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2022 PM EXISTING

06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
v/c Ratio	0.39	0.59	0.56		0.35		
Control Delay	20.4	20.8	19.7		17.9		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	20.4	20.8	19.7		17.9		
LOS	C	C	B		B		
Approach Delay		20.7	19.7		17.9		
Approach LOS		C	B		B		

Intersection Summary

Area Type: Other

Cycle Length: 89

Actuated Cycle Length: 89

Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 20.0

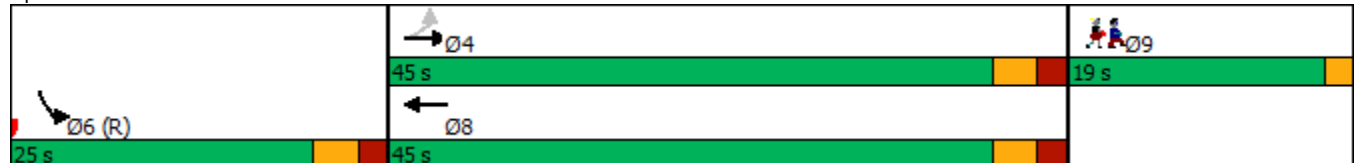
Intersection LOS: B

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15




Splits and Phases: 3: Massachusetts Avenue & Brattle Stret



Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	505	24	9	427	2	11	0	25	0	0	1
Future Vol, veh/h	2	505	24	9	427	2	11	0	25	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	91	91	91	69	69	69	25	25	25
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	2	574	27	10	469	2	16	0	36	0	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	471	0	0	601	0	0	1084	1083	588	1100	1095	470
Stage 1	-	-	-	-	-	-	592	592	-	490	490	-
Stage 2	-	-	-	-	-	-	492	491	-	610	605	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1101	-	-	986	-	-	196	219	513	191	215	598
Stage 1	-	-	-	-	-	-	496	497	-	564	552	-
Stage 2	-	-	-	-	-	-	562	552	-	485	491	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1101	-	-	986	-	-	192	215	513	175	211	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	192	215	-	175	211	-
Stage 1	-	-	-	-	-	-	495	496	-	562	544	-
Stage 2	-	-	-	-	-	-	550	544	-	449	490	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			17.5			11.1		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	340	1101	-	-	986	-	-	598				
HCM Lane V/C Ratio	0.153	0.002	-	-	0.01	-	-	0.007				
HCM Control Delay (s)	17.5	8.3	0	-	8.7	0	-	11.1				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0				

Intersection




Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	529	1	0	438	0	1
Future Vol, veh/h	529	1	0	438	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	93	93	25	25
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	594	1	0	471	0	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	595
Stage 1	-	-	595
Stage 2	-	-	471
Critical Hdwy	-	4.1	6.4
Critical Hdwy Stg 1	-	-	5.4
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	991	248
Stage 1	-	-	555
Stage 2	-	-	632
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	991	248
Mov Cap-2 Maneuver	-	-	248
Stage 1	-	-	555
Stage 2	-	-	632

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	508	-	-	991	-
HCM Lane V/C Ratio	0.008	-	-	-	-
HCM Control Delay (s)	12.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	526	4	8	431	7	17
Future Vol, veh/h	526	4	8	431	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	67	67
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	584	4	8	449	10	25

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	588
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	997
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	997
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

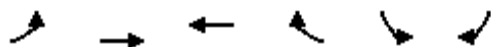
Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	393	-	-	997	-
HCM Lane V/C Ratio	0.091	-	-	0.008	-
HCM Control Delay (s)	15.1	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2029 PM NO-BUILD

06/16/2022

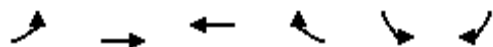


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	107	497	432	38	57	78	
Future Volume (vph)	107	497	432	38	57	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	125			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.989		0.922		
Flt Protected	0.950				0.979		
Satd. Flow (prot)	1805	1863	1824	0	1701	0	
Flt Permitted	0.293				0.979		
Satd. Flow (perm)	557	1863	1824	0	1701	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			7		74		
Link Speed (mph)		30	30		30		
Link Distance (ft)		362	330		475		
Travel Time (s)		8.2	7.5		10.8		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.79	0.79	
Heavy Vehicles (%)	0%	2%	3%	3%	2%	0%	
Adj. Flow (vph)	118	546	475	42	72	99	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	118	546	517	0	171	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Minimum Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (%)	50.6%	50.6%	50.6%		28.1%		21%
Maximum Green (s)	40.0	40.0	40.0		20.0		17.0
Yellow Time (s)	3.0	3.0	3.0		3.0		2.0
All-Red Time (s)	2.0	2.0	2.0		2.0		0.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							0
Act Effect Green (s)	42.0	42.0	42.0		22.0		
Actuated g/C Ratio	0.47	0.47	0.47		0.25		

Baseline

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2029 PM NO-BUILD
06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
v/c Ratio	0.45	0.62	0.60		0.36		
Control Delay	22.7	21.4	20.6		18.2		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	22.7	21.4	20.6		18.2		
LOS	C	C	C		B		
Approach Delay		21.7	20.6		18.2		
Approach LOS		C	C		B		

Intersection Summary

Area Type: Other

Cycle Length: 89

Actuated Cycle Length: 89

Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 20.8

Intersection LOS: C





Intersection Capacity Utilization 76.7%




ICU Level of Service D




Analysis Period (min) 15

Splits and Phases: 3: Massachusetts Avenue & Brattle Stret



Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	527	25	9	458	2	11	0	26	0	0	1
Future Vol, veh/h	2	527	25	9	458	2	11	0	26	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	91	91	91	69	69	69	25	25	25
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	2	599	28	10	503	2	16	0	38	0	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	505	0	0	627	0	0	1143	1142	613	1160	1155	504
Stage 1	-	-	-	-	-	-	617	617	-	524	524	-
Stage 2	-	-	-	-	-	-	526	525	-	636	631	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1070	-	-	965	-	-	179	202	496	174	199	572
Stage 1	-	-	-	-	-	-	481	484	-	540	533	-
Stage 2	-	-	-	-	-	-	539	533	-	469	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1070	-	-	965	-	-	175	199	496	159	196	572
Mov Cap-2 Maneuver	-	-	-	-	-	-	175	199	-	159	196	-
Stage 1	-	-	-	-	-	-	480	483	-	538	526	-
Stage 2	-	-	-	-	-	-	528	526	-	432	476	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			18.5			11.3		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	321	1070	-	-	965	-	-	572				
HCM Lane V/C Ratio	0.167	0.002	-	-	0.01	-	-	0.007				
HCM Control Delay (s)	18.5	8.4	0	-	8.8	0	-	11.3				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	552	1	0	470	0	1
Future Vol, veh/h	552	1	0	470	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	93	93	25	25
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	620	1	0	505	0	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	621	0	1126	621
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	969	-	229	491
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	610	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	969	-	229	491
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	610	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		12.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	491	-	-	969	-	
HCM Lane V/C Ratio	0.008	-	-	-	-	
HCM Control Delay (s)	12.4	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	549	4	8	462	7	18
Future Vol, veh/h	549	4	8	462	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	67	67
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	610	4	8	481	10	27

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	614	0	1109
Stage 1	-	-	-	-	612
Stage 2	-	-	-	-	497
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	975	-	234
Stage 1	-	-	-	-	545
Stage 2	-	-	-	-	615
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	975	-	231
Mov Cap-2 Maneuver	-	-	-	-	231
Stage 1	-	-	-	-	545
Stage 2	-	-	-	-	608

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.6
HCM LOS			C

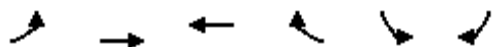
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	376	-	-	975	-
HCM Lane V/C Ratio	0.099	-	-	0.009	-
HCM Control Delay (s)	15.6	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings

3: Massachusetts Avenue & Brattle Stret

2029 PM BUILD

06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	107	503	436	38	57	78	
Future Volume (vph)	107	503	436	38	57	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	125			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.989		0.922		
Flt Protected	0.950				0.979		
Satd. Flow (prot)	1805	1863	1824	0	1701	0	
Flt Permitted	0.290				0.979		
Satd. Flow (perm)	551	1863	1824	0	1701	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			7		74		
Link Speed (mph)		30	30		30		
Link Distance (ft)		362	330		475		
Travel Time (s)		8.2	7.5		10.8		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.79	0.79	
Heavy Vehicles (%)	0%	2%	3%	3%	2%	0%	
Adj. Flow (vph)	118	553	479	42	72	99	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	118	553	521	0	171	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Turn Type	Perm	NA	NA		Prot		
Protected Phases		4	8		6		9
Permitted Phases	4						
Minimum Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (s)	45.0	45.0	45.0		25.0		19.0
Total Split (%)	50.6%	50.6%	50.6%		28.1%		21%
Maximum Green (s)	40.0	40.0	40.0		20.0		17.0
Yellow Time (s)	3.0	3.0	3.0		3.0		2.0
All-Red Time (s)	2.0	2.0	2.0		2.0		0.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0		
Total Lost Time (s)	3.0	3.0	3.0		3.0		
Lead/Lag							
Lead-Lag Optimize?							
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							0
Act Effect Green (s)	42.0	42.0	42.0		22.0		
Actuated g/C Ratio	0.47	0.47	0.47		0.25		

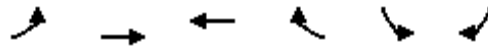
Baseline

Synchro 10 Report
Page 1

Lanes, Volumes, Timings
3: Massachusetts Avenue & Brattle Stret

2029 PM BUILD

06/16/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
v/c Ratio	0.45	0.63	0.60		0.36		
Control Delay	22.9	21.7	20.8		18.2		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	22.9	21.7	20.8		18.2		
LOS	C	C	C		B		
Approach Delay		21.9	20.8		18.2		
Approach LOS		C	C		B		

Intersection Summary

Area Type: Other

Cycle Length: 89

Actuated Cycle Length: 89

Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 21.0

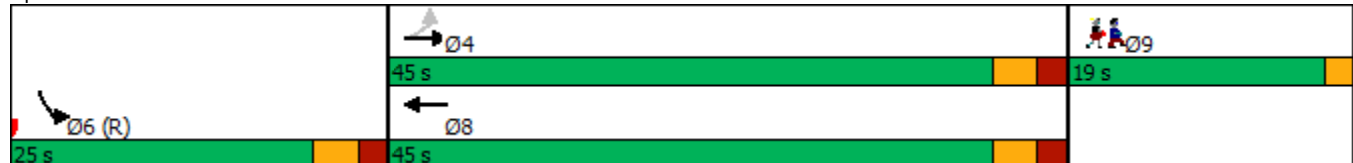
Intersection LOS: C

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15




Splits and Phases: 3: Massachusetts Avenue & Brattle Stret



Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	533	25	9	462	2	11	0	26	0	0	1
Future Vol, veh/h	2	533	25	9	462	2	11	0	26	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	91	91	91	69	69	69	25	25	25
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	2	606	28	10	508	2	16	0	38	0	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	510	0	0	634	0	0	1155	1154	620	1172	1167	509
Stage 1	-	-	-	-	-	-	624	624	-	529	529	-
Stage 2	-	-	-	-	-	-	531	530	-	643	638	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1065	-	-	959	-	-	175	199	492	171	195	568
Stage 1	-	-	-	-	-	-	477	481	-	537	530	-
Stage 2	-	-	-	-	-	-	536	530	-	465	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1065	-	-	959	-	-	171	195	492	156	191	568
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	195	-	156	191	-
Stage 1	-	-	-	-	-	-	476	480	-	535	522	-
Stage 2	-	-	-	-	-	-	524	522	-	428	473	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			18.7			11.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	316	1065	-	-	959	-	-	568				
HCM Lane V/C Ratio	0.17	0.002	-	-	0.01	-	-	0.007				
HCM Control Delay (s)	18.7	8.4	0	-	8.8	0	-	11.4				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0				

Intersection




Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	559	1	0	480	0	1
Future Vol, veh/h	559	1	0	480	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	93	93	25	25
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	628	1	0	516	0	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	629
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	963
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	963
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-




Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	-	-	963	-
HCM Lane V/C Ratio	0.008	-	-	-	-
HCM Control Delay (s)	12.5	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	556	4	8	472	7	18
Future Vol, veh/h	556	4	8	472	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	67	67
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	618	4	8	492	10	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	622	0	1128	620
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	508	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	969	-	228	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	969	-	225	492
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	601	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		15.9	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	369	-	-	969	-	
HCM Lane V/C Ratio	0.101	-	-	0.009	-	
HCM Control Delay (s)	15.9	-	-	8.7	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	553	470	10	7	4
Future Vol, veh/h	6	553	470	10	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	601	511	11	8	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	522	0	0 1132 517
Stage 1	-	-	- 517 -
Stage 2	-	-	- 615 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1044	-	- 225 558
Stage 1	-	-	- 598 -
Stage 2	-	-	- 539 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1044	-	- 223 558
Mov Cap-2 Maneuver	-	-	- 223 -
Stage 1	-	-	- 592 -
Stage 2	-	-	- 539 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	18.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1044	-	-	-	285
HCM Lane V/C Ratio	0.006	-	-	-	0.042
HCM Control Delay (s)	8.5	0	-	-	18.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1